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RICHARD H. EDMONDS, Pres. VICTOR H. POWER, Treas.
FRANK GOULD, Vice-Pres. I. S. FIELD, Sec'y.

RICHARD H. EDMONDS, Editor and General Manager

BRANCH OFFICES:

NEW YORK, 52 Broadway CHICAGO, 1409 Fisher Bldg.
BOSTON, 733 Old South Bldg. ST. LOUIS, 606 Century Building

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"EVERY BUSH'S AFIRE WITH GOD."

Atlanta, Ga., Jan. 17., 1917.

Editor Manufacturers Record:

I have been a subscriber to the RECORD for a number of years under the address of the Southern Bell Telephone & Telegraph Co., and the subscription was renewed three or four months ago.

I have but one suggestion to make in regard to your journal, the general character of which I appreciate very highly. Put in more business, especially in regard to the undeveloped resources of the South, and less politics. We get the politics from other sources.

CHAUNCEY SMITH.

The MANUFACTURERS RECORD never discusses politics as politics, but it does discuss public questions that relate to the great economic problems of the hour.

Would Mr. Smith have us ignore the tariff question? The tariff is an economic question vitally affecting all business interests.

Would Mr. Smith have us ignore railroad legislation, which vitally affects every man, woman and child in the United States and bears directly on the development of the South?

Would Mr. Smith have us ignore all questions bearing on the war, which is the greatest economic problem in human history, even if we were to ignore its moral aspect and its bearing on the democracy of the world?

Would Mr. Smith have us ignore the questions pertaining to good roads, to river and harbor improvements, to shipbuilding and naval expansion? They all come into the domain of politics, and are affected by legislation.

Would Mr. Smith have us ignore the questions of an armor-plate plant and its location in the interior as a safeguard to national life? This is in politics, and is dominated by politics.

Is it Mr. Smith's idea that the MANUFACTURERS RECORD would be more valuable if it were merely an inane catalogue of Southern resources, without any opinion on any public question, or, if it had an opinion, afraid to express it, because, forsooth, some subscriber or advertiser might think the other way?

If that is Mr. Smith's idea, we are unable to accept his view of the policy which should control the MANUFACTURERS RECORD.

We are living in a momentous period, beyond all human power to grasp.

The mightiest forces of evil and good are arrayed in the mightiest struggle since man was created.

The mightiest changes are taking place in governments, in social and economic conditions, which the world has ever seen.

Shall we sit idly by and not try to study and discuss these things, content merely to concentrate our thought upon purely material affairs? Mrs. Browning sang:

Earth's crammed with Heaven,
And every common bush afire with God;
But only he who sees takes off his shoes,
The rest sit round it and pluck blackberries.

The MANUFACTURERS RECORD has no desire in these momentous days to stand before the bush that's "afire with God" to pluck blackberries.

Trusteeship to the Nation of the United States Steel Corporation.

AN OPEN LETTER:

To the Officers, Directors and Stockholders
of the United States Steel Corporation:

Gentlemen:

Under the guidance of Judge Gary and his associates the United States Steel Corporation has led the world in teaching to all business organizations the responsibility which rests upon them in reference to the public and to their employees. It was through the influence of this leadership that the spirit of co-operation and friendly competition was made to take the place of cut-throat competition in the iron and steel trade of this country. This splendid work has moulded the thought of the country to a far greater extent than has yet been understood, and its importance will never be fully realized by the public until the history of this work and of the influence of the "Gary" dinners and of the American Iron and Steel Institute has been written in the years to come. This spirit has found expression in the motto of the American Iron and Steel Institute, "Right makes might," and I believe that this is the spirit which dominates your organization through all of its wide ramifications in relation to the public, to its competitors, to its customers and to its employees.

Out of this teaching has developed a broad sense of trusteeship of every great business organization to the public and to the country at large. In effect Judge Gary has strongly presented this in some recent public utterances which justify me in bringing this phase of the subject to your attention. It is from this point of view that I would press upon your thought the trusteeship of the United States Steel Corporation in relation to the nation's welfare with special reference to your ownership in Alabama of what is doubtless the largest possession of iron ore and coal, considering proximity of these materials to each other, held by any one company in the world. Your company is also trustee for the nation because of the magnitude of your operations. You are producing far more steel than the aggregate output in Germany, and than the aggregate of Great Britain. This makes your company in all its ramifications a vital factor in national affairs.

Through your purchase of the Tennessee Coal, Iron & Railroad Co. you became possessed of this remarkable property with its hundreds of millions of tons of ore and a still greater quantity of coal, almost within rifle shot of each other. This, which, as I said, is doubtless the largest single property of this kind owned by any concern in the world, has a vital relation to the prosperity of the South, to the progress of the whole country and to its safety in time of war. The quantity of ore thus owned, amounting to probably 600,000,000 tons, about equals your entire ore ownership when the Steel Corporation was organized, and the amount of coal you own in Alabama is, I believe, several times as great as the total amount held by your company at its organization. Moreover, this Alabama coal and ore are practically within rifle shot of each other, while your coal and ore in other sections are from 1000 to 1500 miles apart.

In the ownership of this property you are a trustee for the nation, and in a narrower sense for the South. The development of this section and the insurance of the country against the danger of destruction in time of war will largely depend upon how you as trustee handle your vast interests in Alabama. You can retard the development of the South materially or you can hasten it immensely, according to the way in which you utilize the great properties under your control. Your ownership of them will prove a distinct detriment to the South rather than an advantage to this section if they are not developed. There is, moreover, a very much broader point from which to view this situation than that of the halting or the hastening of Southern development.

Outside of the ownership of these properties in Alabama, your interests are almost wholly centered in Pennsylvania and the Central West, and your furnaces and steel works are wholly dependent upon Lake ores. The mighty weight of your influence is concentrated upon the development of the Lake ore region and the furnaces fed by Lake ores. You cannot possibly be unmindful of the fact that in this day when all theories of peace of the past have had to give way before the stern logic of war, there is no safety to your Western interests nor to the country so long as you are dependent upon one source for your ore when that source could over night be taken from you in

the event of war. I can scarcely conceive that it is possible for the United States and Great Britain, the two great Anglo-Saxon nations, which should be united for the advancement of civilization, ever to become engaged in war. Nevertheless, this is not more impossible than three years ago would have seemed the amazing conditions existing in Europe today.

If such a disaster should come upon the world as a war between Great Britain and the United States, you know full well that within a few hours, and even before a declaration of war had been officially made, the entire Lake ore region would be out of our possession and all your vast iron and steel interests and those of all others dependent upon Lake ores would meet such a cataclysm of disaster as to shock the business world as it never has been shocked. You can readily recognize that under such conditions this country would be powerless to defend itself because you and others had failed to develop on a large scale the iron and steel interests of the South and the Southwest. It would then be impossible to construct new steel works or munition plants in other sections, however great the supply of raw materials. Disastrous as would be such a surrender, you can readily see that we could not strike a blow in our defense, but would have to yield to any terms demanded and pay any indemnity required of us.

Your knowledge of the situation is so intimate that you know full well that these statements are founded on truth and not on mere theory.

With your vast operations in iron and steel, leading the world in this respect, with your properties worth, as I believe, far more than your total capitalization, with your trusteeship, by virtue of the magnitude of your operations, to the country and to your stockholders, does it not behoove you to give earnest thought and effort to the immediate development on a large scale of your vast iron and coal properties in Alabama that you may thus help to safeguard the future of the nation, and in this way insure the safety of your own properties in other sections. If you were to announce this as your definite policy you would send such a thrill of life through the whole country as to be of incalculable value to your own interests and to the nation.

I am not unmindful of the fact that since suit was entered against the Corporation by the United States Government you have been unwilling to enlarge your investment in your Alabama properties by extending the capacity of your plants at that point. I know that prior to this suit you had planned for continued extensions of your Alabama plants.

With all of these facts in mind, I am urging this matter upon your consideration, hoping that you may look at this whole situation from a broader point of view than that of merely the development of one of your subsidiary companies.

In the ownership of the Tennessee Coal, Iron & Railroad Co. your relation to the South and to the nation is much broader than that of holding merely a subsidiary company. It is the relation of trustee over a vast body of raw materials whose development is essential to the welfare of the South and to the safety of the country.

I am asking your consideration of these questions now, because in the near future the United States Supreme Court will render a decision in the suit which for some years has been pending against you. If this suit should be decided in favor of the Steel Corporation, you will be at liberty immediately, if you are so disposed, to develop on a very large scale your Alabama interests.

Among many business concerns there is a tendency at the moment by reason of high prices of labor and material not to carry out great constructive enterprises, but I believe that your company, so far as its Alabama properties are concerned, could well afford, regardless of high prices, to do as the Bethlehem Steel Corporation is doing and go ahead on construction activities on a large scale.

Since your purchase of the Tennessee Coal, Iron & Railroad Co., with its almost limitless supplies of ore and coal, you have expended probably between \$25,000,000 and \$30,000,000 upon construction work. Much of this has been put into the opening up of new mines and the improvement of existing mines, in the tearing down of out-of-date plants and the construction of more modern plants. For the money expended I think you have secured magnificent results, but at Baltimore the Bethlehem Steel Corporation is today spending \$50,000,000 on absolutely new construction work. The plant it bought was so up to date that nothing had to be torn down, and all of this \$50,000,000, probably nearly twice as much as the total construction expenditures that you have made in Alabama, is actually going into new producing capacity of iron and steel and finished products.

In view of your relation as trustee to the country through the ownership of this property, would you not be justified, regardless of the high cost of building operations, to plan for very large expenditures in Alabama without waiting for a return of bad times in order to do your construction work a little more cheaply, or without waiting for the home demand for these products to be so great as to make an immediate market available for all that these new plants should produce?

Would you not be justified in stimulating the development of the South and helping to create a home market for a wide variety of finished products, from rails to shipbuilding materials, by letting the world know that an abundance of steel for every variety of work in steel would be made available by your enlarged Alabama operations? Shipbuilding on the Gulf and South Atlantic coasts should become an industry of national, indeed of world-wide, importance. You could mightily aid this development without put-

WHY CANNOT CONGRESS ADOPT WISE CONSTRUCTIVE POLICY IN TREATMENT OF AMERICAN INDUSTRY AND ENTERPRISE?

CONFRONTED by the necessity for greater revenues to meet the Treasury deficit, the Ways and Means Committee of the House has devised a scheme of further direct taxation that includes a so-called "excess profit" tax, which has met with the unanimous approval of the Democratic members of the committee, and is understood to be equally satisfactory to the Administration.

Representative Fairchild of New York, the only Republican member of the Ways and Means Committee from that State, characterizes the "excess profit" tax as unjust and inequitable, a return to class legislation and an imposition of a tribute on American industry and initiative.

Under its contemplated provisions that portion of the plan for obtaining additional revenues through an "excess profit" tax contemplates a tax of 8 per cent. on the profits on all business that exceeds a return of 8 per cent. on the investment.

In the history of the corporation tax, in which a tax of 1 per cent. was levied on the earnings of corporations, it is remembered that various expedients were resorted to in order to evade the tax. When the corporations consisted of small groups, the corporation was dissolved and its members formed a partnership, continuing business very much the same as before, but escaping the toll. In large corporations, where the stock was distributed among a vast number of holders, this subterfuge was not possible.

Some similar means of evading the excess profit tax doubtless will be attempted in advance of the passage of the measure now in contemplation. As an instance of how this can be done, it will be assumed that there are distinct interests under the same ownership, earning profits varying from 4 to 10 per cent. By a readjustment of charges it will not be impossible to shift the several records of profits back and forth in such manner that the total will not be altered, and yet no single one of the interests show a profit in excess of the taxable rate of 8 per cent.

Another natural tendency of this undesirable law will be to encourage the watering of stock. If a \$2,000,000 corporation is now making 10 per cent. on the investment, an increase of the capitalization to \$4,000,000 would, under unchanged conditions of earning power, immediately reduce the profits to 5 per cent. on the investment, and thus the levy under the new law would be escaped.

Furthermore, the claim has been made that much of the existing stock in many industries is still watered. This naturally means that such, with their relatively meager percentage of profits on the face of the inflated stock, will not be taxed under the proposed plan, while organizations that have reduced the face value of their stock to its right proportions, and which, consequently, are paying honest dividends on bona-fide investments representing the earnings of the people, will be penalized for their honesty.

In all likelihood the legislation bringing about the imposition of the excess profits tax will contain provisions against stock increases or other business readjustments having in view the evasion of the tax. Nevertheless, the word having gone forth of the intended action of Congress, there will be time for numerous protective changes to be effected by business organizations before the passage of preventive legislation.

Apart from the encouragement of subterfuges and evasions, the excess profits tax involves a character of legislation peculiarly unsuited to the development of American industries or to the times. As to general conditions, it belongs properly only to a situation brought about by war, such as has occurred in the leading nations of Europe, and because of which they have temporarily imposed the greatest burdens endurable on the earnings of firms and corporations for the specific purpose of meeting the expenses of the struggle upon which the very existence of the firms depends. Peace must come sooner or later, and then these impositions will be removed. But here we are experiencing, or are about to experience, in times of peace a form of

taxation to which no other nation would resort except under the stress of a protracted and costly war.

The further tendency is to discourage economy and efficiency and incentive to increased strivings to trade extensions at the very moment when they should be encouraged to the utmost. This is not only of universal application in so far as this country is concerned, but it applies in a peculiar way to the industries of the South, which are about to enter on a period of unusual development, and which are fitted in a special manner to participate to advantage in the resurrection of world trade that will come with the close of the war in Europe.

But these incentives and these prospects will be struck a body blow by the excess profits tax. No business enterprise will be encouraged to savings through efficiency methods, with resultant benefits to the workmen, to the public and to the firm itself, if the Government stands ready to pounce upon the profits that will accrue. Consequently there will be less expanding of business, less employment and a higher cost to the ultimate consumer. Despite the enforced levies on business by Great Britain, the business of the empire is growing by leaps and bounds. It knows that the British Government is its friend, and that the profits taken away now will be given back once peace is restored, with accompanying legislation that will enlarge its scope from sea to sea.

Why does not Congress pursue the same wise constructive policy in its treatment of American industry and enterprise? Why is it that one branch of the Government issues almost daily reports on trade opportunities abroad, while the legislative branch not only refuses to liberate American business in order that it may compete on equal terms with the business of foreign countries, but insists on placing a tax on the first evidences presented of its efficient conduct and the first hints of its successful development?

All American business men, and especially Southern men, are under obligation to themselves and to the country to protest against this destructive class legislation, which penalizes constructive effort and hampers the development of all industries. They should be awake to the fact that Congress is leaving undone the things that should be done and is doing the things that should not be done. The water-power development legislation is languishing, without a sufficient number of friends to push it to passage, and thus offer opportunities for immeasurably increased activities. The Webb bill, which would permit the co-operation of American trading agencies in overseas trade and add millions to the wealth of the country, should be made a law. And a character of legislation that would bring the needed revenues and at the same time protect American industries and the American workmen—in other words, a protective tariff—should replace a war tax measure in time of peace that will be at the expense of American industry, American labor and the prosperity and development of this nation.

THE DANGER OF DEPENDENCE UPON LAKE ORES.

SENATOR TILLMAN, chairman of the Naval Committee, in the course of an interview in the MANUFACTURERS RECORD last week, said:

"Admiral Fletcher called my attention to the fact that the present source of Bessemer pig-iron is Lake Superior ores. In this connection we both remarked, in passing, that at any time this supply might be cut off by the destruction of the Soo Canal, through which these ores pass. The destruction of this canal would not be a difficult enterprise at all."

This is simply an official emphasis of the facts we have been regularly publishing for more than a year as to the probability of our Lake Superior ore supply being cut off at any time. We are glad to see that Admiral Fletcher not only recognizes the danger, but frankly publicly calls attention to it. The only safety for the nation is through the larger development of the iron ores of the South and Southwest.

ting a dollar into building of shipyards by building plants in Alabama to furnish steel shipbuilding material, with the assurance to the shipyards that an ample supply of material at the best competitive prices would be obtainable. You would thus build a foundation on which to base the establishment of shipyards and of many other industries, all of which would inure to the prosperity of your company in all of its operations and to the benefit of the nation.

The need of your helping to develop, even indirectly, shipbuilding on the South Atlantic and Gulf coasts, by the manufacture of shipbuilding material in Alabama, is strikingly emphasized by the present situation in naval construction work.

Though Congress has appropriated hundreds of millions of dollars for much-needed battleships and cruisers, the safety of the country is at stake because we have not shipyards in sufficient number to build these vessels, and the Secretary of the Navy is appealing to Congress to enlarge existing Government shipyards in order to meet this crisis in naval work.

You could mightily help the whole situation and make feasible the larger development of shipbuilding in the South, even if you did not invest one dollar in shipbuilding plants, by a fairly large development, as compared with its advantages, of your Alabama property.

Upon one plant at Baltimore, as I have already stated, the Bethlehem Steel Corporation is spending for construction work \$50,000,000, and at its other two plants \$50,000,000 more. For its Baltimore plant and largely for its other plants it will have to bring its ore from Cuba, Chile, the Mediterranean and New Foundland, or for from 1500 to 4000 miles. After being hauled that long distance to Baltimore this ore will meet the coal from West Virginia, which is carried several hundred miles. In your Alabama properties, with approximately 600,000,000 tons of ore and 2,000,000,000 or more tons of coal, almost within sight of each other, and with the limestone in between, you have expended in reconstruction work, which absorbed a considerable proportion of this amount, in the opening of mines and the rebuilding of out-of-date plants, and in new work, probably about one-half of what the Bethlehem will spend in new constructions at Baltimore alone.

Is it too much to hope, in view of these facts, that regardless of present high prices for labor and material, your corporation, if the suit is decided in its favor, will feel justified in spending upon its unmatched Alabama properties at least as much as the Bethlehem Corporation is spending upon its one plant at Baltimore? And if the decision should be adverse to your corporation, you can still largely control the question as to whether this property shall be adequately developed or its development be held back in such a way as to be a clog on Southern progress and a danger to the nation's safety. Such an expenditure would quicken the whole South. It would stimulate every line of activity. It would result in railroad expansion, in the building of shipyards, and it would convince the world that you had definitely undertaken a policy commensurate with the wealth of the South's raw materials and of the South's strategic location in time of war as in time of peace.

If, perchance, the United States Supreme Court should decide that the Steel Corporation must be divided up, though in view of the unanimous decision of the lower court that your corporation is not a monopoly I cannot see that this is possible, it would still be in your power to shape the destiny of the Tennessee Coal, Iron & Railroad Co. Any reorganization that might be necessary under such an adverse decision would doubtless leave to your company the right to work out a satisfactory solution of the Tennessee Company, just as the subsidiary properties of the Standard Oil Company have been handled and developed. In the event of an adverse decision it would probably be entirely within your power, whether by a sale of the Tennessee Company or by its management through friendly interests, or through the same stockholders, as was the case in the Standard Oil dissolution, to wholly control the future of the Tennessee Company. You could handle it in such a way as to bring about a depressing influence upon its extension and thus upon the advancement of the South and the safety of the nation, or you could so handle it as to make its development worthy of its relation to the progress and the safety of the country. There is no way whatsoever, so far as I can see, by which you can be relieved of or release yourself from the responsibility of trustee to the South and to the nation in the ownership of this property. You acquired it under conditions which I believe had due regard to national welfare and without any desire to secure it in order to prevent its becoming a great competitor to your other interests. Owning it under such conditions as these, facing as you did at the time of its purchase the sense of the responsibility as trustee for the financial interests of the nation then at stake, your trusteeship will continue whether it is left in your hands by the Supreme Court or whether you are required to divest yourself of its absolute ownership and pass its control to your stockholders, instead of being controlled as at present by the corporation itself.

I am bringing these facts to your consideration in this public way, with the hope that they will be given the most thoughtful consideration and be looked at from every point of view. Should you, by failure to develop this property adequately along these lines, create the impression that you are holding these vast raw materials only partly developed merely awaiting your convenience when the economic progress of the South would force its development on a larger scale, a most unfavorable impression would be created not alone in the South, but throughout the land. The time has long since passed, as you well know, when corporations can afford to ignore public sentiment. We are has-

tening to an evil day and to a day of all Government ownership of everything in the way of productive interests unless the great corporations of the country show by their work their recognition of the trusteeship relation which they hold to the public and to the country. Under Judge Gary's splendid leadership you have done such a great work for allaying hostile criticism and for developing a spirit of co-operation that I trust you will go still farther and carry out in a broad spirit the suggestions here made. If you do so, you will win the enthusiastic commendation of the South and of the country. You will cause the public to see that in your purchase of the Tennessee Company you had in mind the best interests of the nation, and that in your development of this property you were looking to the welfare of the whole country and preparing against that day, should such an unfortunate day ever come, when war would mean devastation to the country unless we had safeguarded ourselves by developing far away from the coast and from the Lakes great iron and steel and kindred enterprises.

In studying this matter and the relation of the South to the nation, please do not overlook the fact that the ablest scientists in the United States say that there is no other area in this or any other country so marvelously endowed by Nature with advantages for industrial and agricultural development.

Bear in mind, please, that three-fifths of the coast line of Continental United States is in the South, and that there cannot possibly be any safety to this country until this coast line is adequately protected.

You will remember also that all of the cotton crop which makes possible the textile interests of the East, and which in normal times furnishes the balance of trade in our international relations, bringing to this country annually about \$500,000,000 from Europe, is produced in the South.

You are doubtless aware of the fact that in 1915 the grain crop of the South was over 1,600,000,000 bushels; that the cotton crop of last year was worth \$1,357,000,000, and that the total value of the South's agricultural products last year was \$4,650,000,000.

This region, more richly endowed by Nature than any other land on earth, is the greatest undeveloped asset of the United States, for its present development is triflingly small as compared with what its future can be and what it will be if your Corporation and other great leaders in industry and finance recognize that in developing the South you are enriching the nation and rounding out national life.

The destiny of the country may yet depend wholly upon how you now handle the hundreds of millions of tons of ore and the billions of tons of coal you hold in Alabama as a trustee for the nation.

Very truly yours,

RICHARD H. EDMONDS,
Editor.

Daytona, Fla., January 27, 1917.

Since the foregoing was written an article has appeared in the *World's Work* by Rear-Admiral Fiske, United States Navy, Retired, pointing out some of the dangers which this country faces. In this statement Admiral Fiske says:

It has been said by many persons of importance that there is no danger of the United States being drawn into war with any nation or nations now fighting in Europe because those nations will be too exhausted in men and money to be able to do any more fighting. This idea seems good at first thought, but the persons who hold it forget that the nations now fighting are fighting with armies and that they would not need armies to fight us, but only navies. And they forget, too, that the war probably will end with their navies at least as formidable as they were; that the expense of sending any fleet or fleets across the Atlantic would not be very much greater than that of maintaining them where they are; that the risk of sending a very large force against us would not be great, especially if an attack were simultaneously threatened on our Pacific coast, and that the amount of indemnity that could be exacted and collected would be so great and the "security" or chance of success so good as to make the enterprise a good business venture.

If actual invasion by troops would be necessary, the venture would be more difficult and expensive, but not so difficult and expensive as the pacifists declare; for the reason that we have no resisting force that would be adequate in numbers, material or training to oppose the troops that would be sent, fresh from the most instructive and practical experience that the world has ever given. Our people do not realize the difference between the highly trained, highly officered and highly generalized European army that would be sent and the untrained army with which we should oppose it, officered by inexperienced officers, generalized by inexperienced generals, unused to act together as an army, and no more to be compared with the armies operating in Europe now than a boy's baseball team in a country village is to be compared with the "Red Sox" team of Boston.

That a large indemnity could be collected by the simple act of blockading our principal ports, stopping our export and import trades and making aerial raids from the blockading ships on our great coast cities some may deny, stoutly declaring our ability to maintain ourselves indefinitely and to tire out the blockading force before we would yield. Not being a prophet, I cannot dispute this stand authoritatively; I can only point out that this kind of endurance would be the most passive possible kind of a purely passive defense, and that history contains no record of any purely passive defensive succeeding against a vigorous offensive. The United States might, if it chose, hold out for a long time, but during all that long time it would be leading a life increasingly restricted; the United States would be in jail.

In the end, unless it did differently from what all other countries that have found them-

NEXT AMERICAN ROAD BUILDERS' CONVENTION SHOULD BE HELD SOUTH.

THE South should make an aggressive fight to secure the convention of the American Road Builders' Association in 1918. All conditions suggest that the time is ripe for this important meeting to be held in the South, and it is believed efforts in this direction will be met with success.

Next week the association will hold its annual convention, road congress and exhibition of road-building materials and equipment in Boston. Last year it met in Pittsburgh, and the year before that in Chicago, so that in successive years the East, the Central West and the West have enjoyed the benefits that follow the meetings of these road-building experts, and it would seem in logical order for the South to be chosen for the 1918 meeting.

It will be necessary for the South to put up a real fight, however, because there is keen rivalry among cities throughout the country to secure the meetings of this important organization. It is understood that already two Southern cities are arranging to extend an invitation to the Road Builders for next year, and are planning an aggressive campaign in their behalf.

The MANUFACTURERS RECORD is in hearty sympathy with the efforts to secure this convention in the South in 1918. We realize that the bringing of these noted road-building experts to the South will be fraught with great benefit to public officials, engineers, contractors and all others having to do with the carrying forward of road construction along the most approved plans of the day.

During recent years the Southern States have become more highly appreciative of the many benefits accruing from good roads than ever before. This has found expression in the providing of steadily-increasing funds to carry on this work. During the past year the South has enjoyed unprecedented prosperity along agricultural, industrial and commercial lines. This prosperity is going to be reflected in the voting of still greater funds for public improvements, prominent among which will be those for the construction of modern highways to meet the traffic conditions of the day.

A big road congress held in the South will enable those of the South in charge of such work to discuss with noted engineers and road-building experts who attend these meetings the problems that confront Southern communities, and will undoubtedly help them in their work. At the same time, Southern road builders will have much valuable information to impart concerning the methods they have employed to meet the problems before them.

The aims and purposes of the American Road Builders' Association, as we take it, are to allow its members to acquaint themselves with road-building conditions in every part of the country. Nothing serves to accomplish this desirable end so much as holding meetings in different sections of the country in regular order, because in this way its members can obtain first-hand information of methods employed by all sections of the country to meet every phase of traffic and road-building problems. It would seem, therefore, that the selection of the South for next year's meeting would not only be of mutual advantage, but right in line with the purpose of keeping in direct touch with road work in every part of the country.

EUROPE PLANNING TO SPEND MILLIONS FOR NEW HOTELS.

IN direct line with the statement made in the MANUFACTURERS RECORD two weeks ago in regard to the probability of an enormous tourist business to Europe after the war, it is interesting to note in the *Engineering News* the statement that the French people are looking to a great revival of trade when the war is over, and estimate that nearly \$100,000,000 must be spent in building additional hotels to care for tourists. It is thought that much of the materials for these hotels will be imported. Similar conditions are reported from Russia, Italy and Belgium.

GERMAN STEEL MAKERS PREPARING TO SELL IN AMERICA.

THE MANUFACTURERS RECORD learns that some of the big steel companies of Central Europe, believing that the war will end within six months, are already laying their plans for heavy shipments to this country. They are even now negotiating for advertising space in American papers, intending to carry on a very aggressive campaign through heavy advertising, in order to force their way into the American market. A well-informed German living in New York, who is in touch with the situation, advises the MANUFACTURERS RECORD that all leading German houses will, at the close of the war, make a strong effort to build up their foreign trade the moment their shipping facilities are released.

In this connection it is said that German merchant steamers now tied up at home ports are practically all ready to load and sail for this country the moment peace is declared, and it is interesting to note that statements are being made that many, if not all, of the interned German ships in American ports have been changed from coal to oil burners, have on board a full supply of fuel oil and will be ready to move the moment the time for their release comes.

It is stated that these large Central Europe steel manufacturers are taking the ground that within six months the war will have ended, or that an armistice will be declared for the purpose of peace negotiations, and that when this is done, they say "fighting will never be resumed." It is in view of this situation that these manufacturers are already figuring on the heavy advertising campaign in America.

We give these statements for what they may be worth. The internal evidence, as far as we can investigate the situation, seems to prove that what we have here outlined is in exact accordance with what German houses are now preparing to do. It is an interesting sidelight on the situation.

THE ARMOR PLANT SITE QUESTION.

THE MANUFACTURERS RECORD regrets that it is not possible, within the limits of its space, to publish the briefs which are being submitted to the Naval Board by the various towns and cities in the South and Southwest, presenting their advantages for the Government's armor plant. Many of these briefs are exceptionally interesting. Some of them are able papers. But we could not undertake to publish any one of them without publishing all, and, at the moment, it is impossible to find room for this. We shall be glad, however, to have filed with us for reference and for our library every brief prepared by Southern or Southwestern towns in favor of their advantages for the armor plant.

Glittering generalities would be without value, and we are glad to say that most of these papers or briefs which have been furnished to us have been carefully and intelligently prepared. Some of them have needed the advice of experts familiar with metallurgical interests, but as a whole the papers are well worth the careful study of the members of the Naval Board.

ACTIVITY IN SOUTHERN MINING ENTERPRISES.

DURING the past several months there has been increasing activity in Southern mining developments, including both new enterprises and the enlargement of old. For the current week a capitalization of more than \$6,000,000 is represented in the reports of numerous corporations. West Virginia and Kentucky developments are principally for coal production, while in Alabama it is mainly graphite that is attracting the attention of investors. Among the many reports this week is the \$1,000,000 expenditure of the Main Island Creek Coal Co. of Charleston, W. Va., which will open additional mines in Logan county, enabling the company to double its annual production, the increase being from 1,500,000 to 3,000,000 tons. Another important proposition is

selves in similar predicaments have done, it would follow the path of wisdom, yield to the inevitable necessity and make peace, and then start in, as France and many other countries have done, to retrieve the errors of the past and build up an adequate national strength.

This is not an overdrawn statement.

Every intelligent man knows that what Admiral Fiske outlines is entirely feasible and that we live in constant menace of the possibility of this evil coming upon us.

Every director and official of the United States Steel Corporation, I am sure, fully recognizes the truth of the conditions as outlined by Admiral Fiske. They are not new to any of them. Does not this situation, however, very strongly appeal to the patriotism as well as to common business prudence of you gentlemen, who hold in your hand the destiny of this country by reason of your vast iron and steel operations, to take IMMEDIATE steps to insure the future of your own property as well as the future of the country?

There is no possible insurance policy that can be issued, for your safety or the nation's, except one based on the large development of iron and steel and munition interests in the interior, away from dependence upon Lake and foreign ores and from danger of attack by sea.

In connection with this there would necessarily come the development of shipbuilding on a large scale, and following that the establishment of naval bases on the South Atlantic and Gulf coasts.

Even if you gentlemen were among the small number of people, and I am sure none of you are, who lack the patriotism which includes the South in their love of country, you would be compelled to recognize that this section has three-fifths of the coast line of continental United States, and that as it stands today it is an open gateway, inviting aggression and invasion. This section, however, can be so strengthened by the development of iron and steel making and shipbuilding and munition manufacturing interests as to make it the only possible safeguard of the nation. On the other hand, however, except through an alliance, offensive and defensive, with Great Britain, it is not possible to secure for the Lake Superior district, upon which more than 90 per cent. of the steel output of the country depends, any guarantee of insurance for the future. It is not at all probable that such an alliance with Great Britain will be made. You cannot, therefore, by any human power available in this country make the Lake Superior district, and all the vast interests dependent upon it, safe against capture.

Admiral Fiske's article states the case as to the ease with which our ports could be blockaded and a great indemnity demanded, but if it were Great Britain and the Allies which should, by reason of diplomatic blunders on our part, take this position, a much less expensive and easier way would be open to them. Over night they could shut off the ore which supplies 90 per cent. of the steel production of the United States, and when this was done we would have to yield to their own terms, as Admiral Fiske suggests we might have to do if our ports were blockaded. They need not, indeed, take the trouble to send a navy over here. They already have in Canada and in Canadian waters an army and a navy abundantly able to do this without the sending of a single additional soldier or warship.

It is in your power to avoid the results of such a situation by developing NOW, NOT IN THE DISTANT FUTURE, iron and steel interests elsewhere which would save you and the country in the time of such a storm. Will you do it in your own interest as well as that of the entire country?

R. H. E.

the Simpson Creek Coal Co. of Simpson, W. Va., which Baltimore and New York capitalists have formed to develop extensive lands in Taylor and Barbour counties, their plans including the construction of a railway and a modern mining town. Richmond (Va.) capital is forming the Letcher County Coal Corporation, which will be capitalized at \$500,000 and will open mines in Letcher county, Kentucky. Virginia property will be developed by the Cambro-Clinton Mining Corporation, a \$300,000 enterprise organized at Richmond.

New graphite developments for Alabama are represented by the National Graphite Co. of Ashland, which has been organized by Alabama and Illinois capitalists, who intend to invest \$50,000 for a plant with 10-hour capacity of 150 tons, and the King Graphite Co. of Lineville, which has incorporated with \$100,000 capital.

CONGRATULATIONS TO MR. BAKER!

CONGRATULATIONS to Mister Baker—Bernard N. Baker! The one man on the Shipping Board who actually knows from his own achievements anything of value about shipping, and upon whom Secretary McAdoo depended in shaping his bill, is to be congratulated upon his resignation. Every real friend of Mr. Baker should rejoice that he is no longer connected with a foredoomed failure.

Essential Part of Students' Equipment, of Course.

VICTOR C. BARRINGER, Canton, N. C.

Regarding your inquiry as to occupation of my brother, T. C. Barringer, who has taken out a subscription from January 1, 1917, I beg to state that he is a student at the University of Virginia, and therefore is in all the more need of a publication such as the MANUFACTURERS RECORD.

Source of Information Regarding Business Outlook.

T. G. MORRIS, Manager the Dawson Plantation, Breeders of Registered Yorkshire Hogs, Sidon, Miss.

Referring to your inquiry of several days ago, as to my business, I am trying to be a successful cotton and hog farmer.

I want to add that I get more genuine information regarding the business outlook from your magazine than I do from any other periodical I get.

E. T. Spence, T. E. Upchurch and others have incorporated the Lillington (N. C.) Hosiery Mills, with \$10,000 capital.

South as Site for Armor-Plate Plant

VIEWS OF EXPERTS ON QUESTIONS AFFECTING THE CHOICE OF LOCATION—THE NEED OF INVESTIGATION ON THE PART OF THE GOVERNMENT AS TO THE ADAPTABILITY OF THE ELECTRIC FURNACE IN ARMOR-PLATE MANUFACTURE—A QUESTION THE ARMOR-PLATE BOARD IS ASKING.

THE SOUTH THE LOGICAL PLACE.

President Henry Hess, Steel Expert, States Advantages of Thermo-Electric Steel, Where Cheap Electric Power and Requisite Raw Materials Are to Be Found, as in Southern and Middle Atlantic States.

"The best possible armor-plate steel is thermo-electric steel, and this can be produced at favorable cost where cheap electric power, suitable ore, flux and coal are found in close proximity. This points directly to our Southern and Middle Atlantic States as the site."

This is the declaration of Mr. Henry Hess, president of the Hess Steel Co., Baltimore, who was asked by the MANUFACTURERS RECORD for an opinion as to whether the Government might not make armor plate by use of the thermo-electric process.

In view of the great stores of raw materials for iron making—ores, flux and coal—in close proximity in a number of localities South, and because of the potential and developed water-powers South, making it possible to generate a greater volume of hydro-electric current, cheaply, than in any other portion of the country, it would seem in order for the Government to investigate the feasibility of locating its armor-plate plant with reference to the utilization of water-power for manufacturing steel in an electric furnace.

Hence these questions were submitted to Mr. Hess:

Can the Government use the thermo-electric process of steel making in an armor plant?

Are there any limitations in the use of this power as to furnace capacity or any other way?

What bearing on the location of plant should the presence of unlimited, extremely cheap electric energy have?

What is the extent to which this power can be used over other powers in eliminating from ore and pig phosphorus, sulphur, etc.

In reply, Mr. Hess has written to the MANUFACTURERS RECORD:

"A complete armor-making plant, capable of producing plate from the ore, must be located where the raw materials, such as ore, limestone and coal, are found in convenient proximity. If the best possible armor plate is to be produced, cheap electric power must also be available."

"Obvious reasons make a location well removed from the seaboard desirable."

"As to the suitability of the thermo-electric process for armor-plate steel:

"The best of armor plate has been formerly produced by the crucible process, and much is still so made, but necessarily at a cost much higher than steel made in the open-hearth furnace. It is there that the electric furnace finds useful and economical application, with no size limitation. With cheap electric current the refining of steel in the electric furnace is not only cheaper and quicker than in open hearth, but also results in a superior product, fully equal to that of the crucibles; over this latter it also possesses the decided advantage of greater density and decided uniformity."

"Summing up, the best possible armor-plate steel is thermo-electric steel, and this can be produced at favorable cost where cheap electric power, suitable ore, flux and coal are found in close proximity. This points directly to our Southern and Middle Atlantic States as the site."

Mr. Hess has long been identified with electric steel making. Although president of the Hess Steel Co. of Baltimore, he freely recognizes the fact that the armor plant should be built in the interior, far away from the coast, where ore and coal are in abundance and says that this points directly to the South and Middle Atlantic States as the proper site. Mr. Hess lays stress

upon the electric furnace for steel making for armor plate and the importance of cheap electric power available where the ore and coal are found

These statements are directly, vigorously in favor of the South. In this section are to be found the ore, the coal, the limestone and cheap electric power, if the Government should decide in favor of electric-furnace steel.

The MANUFACTURERS RECORD has fought for Government recognition of the availability of all Southern ores for armor plate making, though it has not been unmindful of the fact that there are sections of the South where Bessemer ores can be found and that one Southern furnace is making pig-iron lower in phosphorous than that of any other furnace in the United States, with one exception. This fact was published in the MANUFACTURERS RECORD some months ago. Our contention has been broader than this, and we have insisted that this is not a question of the kind of ores mined, of the kind of pig-iron made, but of the final product of steel.

The statements made by Mr. Hess are important as still further broadening the scope of this investigation and of widening the country's knowledge of the vast iron and steel-making resources of the South. Those who sought to discredit the South as a site for an armor plant have unwillingly helped to give this section the best opportunity it has ever had to enlarge the world's knowledge of its steel-making potentialities.

THE GOVERNMENT SHOULD EXPERIMENT BEFORE GOING AHEAD.

View of W. R. Whitney, Director of Research, Laboratory of General Electric Co.

The same questions propounded to Mr. Hess were asked of Dr. W. R. Whitney, who is director of the research laboratory of the General Electric Co., Schenectady, N. Y. From Dr. Whitney the following letter has been received:

Schenectady, N. Y., January 29.

Editor Manufacturers Record:

I have just received your letter of January 27.

You must realize that your four questions might be answered quite differently by different engineers, and that, whereas some good may be done by publishing facts, much harm may be done by careless publication or by the use of data which permitted easy misinterpretation. Our desire is to answer your questions to the best of our ability and meet your request for an immediate reply. You should bear in mind, as you probably do, that we may be prejudiced in favor of such experiments as those involving the use of electric furnaces. I treat your questions seriatim.

1. I think the Government might use electric furnaces for armor plate making, but I do not know it, and I have never taken part in the manufacture of any armor plate.

2. Electric steel furnaces have not been constructed, so far as I know, of more than 20 tons capacity.

3. The location versus the cost of the power is too complex a question to be both suitably and briefly answered. I do not think the cost of electric power would be a considerable factor if this were near \$10 per horsepower year, and this price could apparently be reached under favorable conditions in this country. With armor plate worth between \$300 and \$400 a ton, I think the freight from any place in this country to any other would again not be a very determining factor.

4. It is commonly accepted that refining of steel and freeing from sulphur and phosphorus is easily done in electric furnaces.

I had already thought the use of electric furnaces for the production of experimental lots of special steel alloys, whether for armor plate for guns or for armor-piercing projectiles, would form a perfectly proper study for the proposed research laboratory of the Navy Department. In such furnaces the high melting alloys

can be most readily made, and charges of a few hundred pounds or of a ton or two can be more easily and quickly produced than in any other way with which I am familiar. Some such experiments should certainly be tried somewhere before our Government erects large commercial furnaces. It seems to me much more important to determine precisely what composition of steel (whether an alloy with chromium, titanium, nickel, etc.) we need than to proceed to make on a large scale the previously-made product. This is particularly the case with armor-piercing projectiles.

W. R. WHITNEY.

CONCERNED ABOUT CONTENT OF ARMOR-PLATE SCRAP.

Admiral Fletcher Presents a Question That the Armor-Plate Board Is Asking.

From Congressman William B. Oliver of the Sixth District of Alabama the MANUFACTURERS RECORD has received a letter which presents one of the questions about which the Armor-Plate Board desires to be informed, as set forth in a letter of Admiral Fletcher. The correspondence is given herewith:

House of Representatives United States,
Committee on Naval Affairs,

Washington, D. C., January 27.

Editor Manufacturers Record:

I have read with pleasure and profit the interesting articles appearing in your paper from time to time on the suitability of Southern ores for armor plate making.

I have thought it important to secure from the board a specific statement of the difficulties that they apprehended would have to be met if the armor-plate plant was located in the South.

Enclosed you will find a letter, which sets forth the question they desire information about, and it seems to be the one single matter that has given serious worry to Commander Clark, a member of the board.

I have sent a copy of this letter to the different parties interested in our section, and felt that you would be glad to have the same. If you can secure some expert information on this subject it will be greatly appreciated, and I feel can be effectively used when the board makes its visit to the proposed sites in my section

W. B. OLIVER.

Navy Department,
(Annex Building.)
Armor Plant Board,

Washington, D. C., January 25.

My Dear Mr. Oliver:

Complying with your telephone request of this morning to Commander F. H. Clark of the board, the problem regarding high-phosphorus pig-iron is about as follows:

Armor plate heretofore has been made in basic open-hearth furnaces of about 60 tons capacity, and melts from two or three furnaces have been required for one ingot.

The charge for each furnace is usually composed of about 40 per cent. armor-plate scrap, having analysis of about, carbon .35 to .40, nickel 3.5 to 3.8, chrome 1.5 to 1.7, 20 per cent. plain steel scrap and the remainder pig-iron and alloys. The pig-iron is sometimes introduced into the furnace cold and sometimes in the molten state.

The use of armor-plate scrap is necessary in order to reduce as far as possible the accumulation of large quantities of scrap.

The question is as follows:

Granting that the phosphorus in high-phosphorus pig-iron can readily be eliminated in basic open-hearth furnaces in the production of straight carbon steel, is there any complication, as far as armor plate is concerned, due to the use of the armor-plate scrap, and in particular, due to the content of chromium in the scrap?

If there is any complication, what does it add to the cost of the ingot per pound or per ton?

It is understood that the ingot must have approximately the same analysis as the armor-plate scrap given above, with a phosphorus content of about .03 and sulphur content of about .02.

Sincerely yours,

F. F. FLETCHER,

Rear-Admiral, U. S. N.,

President Armor Plant Board.

Hon. William B. Oliver, M.C.,

House of Representatives,

Washington, D. C.

WISE MOVE BY SOUTHERN CITIES.

Eastern Experts Secured to Pass on Character of Southern Iron.

Birmingham, Ala., January 30.—[Special.]—The Chamber of Commerce of Birmingham has engaged Dr. Joseph W. Richards of Lehigh University to represent that city before the Armor Plant Board, with a view to securing the testimony of a high expert from the very center of Pennsylvania's metallurgical activities.

Chattanooga, it is understood, has engaged Dr. John Jermain Porter, a well-known metallurgist and another Eastern expert.

Gadsden will be represented before the board by Maj. John S. Sewell, a retired major of the United States Army Engineering Corps; by Dr. J. Sharshall Grasty, professor of geology, Washington and Lee University, and by officials of the Gulf States Steel Co. and others.

These cities are determined to bring before the Naval Board the expert testimony of men whose reports no one can possibly question for the purpose of showing by the testimony of men from other sections the character of Southern-made steel.

Possibly other sections may have made similar arrangements, but these are the only ones known in this section as having secured Eastern men of high standing for this purpose.

CALL FOR THE NATION TO ARM FOR PEACE.

Notable Speakers at Congress of Constructive Patriotism Point Out Present Duty of American Citizenship.

[Special Correspondence Manufacturers Record.]

Washington, D. C., January 29.

The Congress of Constructive Patriotism, which was held at Washington on January 25 to 27, was part of a gigantic movement under way to develop the spirit of patriotism and preparedness.

Every incident connected with the congress demonstrated the intensity of feeling of the thousands who were in attendance at the various meetings, at which addresses were made by prominent leaders and thinkers from every part of the country. So numerous were the addresses made and letters read that it is not possible within brief space to note more than those of a more outstanding character.

At the first day's session of the congress, which was held at the New Willard Hotel in Washington, the keynote was sounded by former Senator Elihu Root in a call for the nation to arm for peace. He appealed earnestly for a return to the "basic principles upon which this Government was founded," and for universal military service as the only adequate measure for defense. Mr. Root bitterly assailed the principle of "liberty of national evolution" as asserted by Germany, the application of which had resulted in the overwhelming of Serbia and Belgium. He declared that if this is approved by the world "our American freedom will surely die, and die while we live." Mr. Root's plea for universal service and his denunciations of Germany brought the audience to its feet, cheering time and again.

Judge Alton B. Parker of New York presided at the day session and Senator Sutherland of Utah at the

night session. The speakers included S. Stanwood Menkin, first president of the Security League; Lawrence F. Abbott, Mrs. William Cumming Story, William Cumming Story, William Roscoe Thayer, Henry L. Stimpson, former Secretary of War; George von L. Meyer, former Secretary of the Navy, and Rear-Admiral Bradley A. Fiske, retired.

Friday's sessions had for their principal feature the reading of the letter from former President Roosevelt, in which he demanded undivided loyalty to America and the abandonment of citizenship on the "50-50 basis." Colonel Roosevelt's letter characterized the Hay bill as being as "foolish and unpatriotic legislation as was ever put on the statute-books." He further paid his respect to the "male and female apostles of folly and fatuity," who have denounced preparedness. Declaring that preparedness must be of the soul no less than the body, Colonel Roosevelt stigmatized "prosperity at any price, peace at any price, safety first instead of duty first, the love of soft living and the get-rich-quick theory of life" as the things that will destroy America if accepted.

"Citizenship must mean an undivided loyalty to America," continued the letter. "There can be no citizenship on the 50-50 basis; there can be no loyalty half to America and half to Germany or England or France or Ireland or to any other country."

The letter pointed to Lloyd George as the man who has been able to do more than any other Englishman in rallying the workingmen of England to the defense of the country, because they know as a whole that he stands for the people as a whole.

Asking for a national armed force and for a navy second only to that of Great Britain, the letter scored inefficient legislation and the delays in naval construction.

At the Saturday sessions, devoted specifically to the subjects of preparedness and patriotism, addresses were made by many prominent men, including Congressman Augustus P. Gardner of Massachusetts, Senator William E. Borah of Idaho and Herbert Myrich, president of the Orange-Judd Company of Springfield, Mass. Questioning the possibility of a peace without victory, Congressman Gardner bitterly attacked the President's proposal for a world-wide peace, scoring the President's speech from start to finish. In part, he said:

"Instead of devising schemes for universal peace, we should strengthen our flabby muscles and make our country secure. God save us from a Monroe Doctrine of the world, which would force us, at the bidding of an international tribunal, to plunge this country into a European or an Asiatic war in which we had no concern! That is precisely our obligation, however, if we join a league to secure the world's peace."

The Security League, under whose auspices the Congress of Constructive Patriotism was held, went on record in favor of universal military service for all male citizens of the United States at 19 years of age. The Plattsburg system was recommended.

The league also advocated a period of five years in the reserve following training, and suggested that no pay be granted during period of training.

The league deplored "the disproportionate share of responsibility borne by the present members of the National Guard," and declared this responsibility should be borne alike by all citizens.

Stating that comprehensive investigation by the league had revealed that the United States navy today, in spite of the enlarged naval program, was still in fourth place in the navies of the world in the matter of ships and fifth as to personnel, the league demanded that the United States equip itself with a navy which should hold second place only in the Atlantic and first place in the Pacific.

Texas Town Wants Light and Water Plants.

A. L. HENSON, Mayor, Panhandle, Tex.

Our town has no water and electric plant, but we are very much in need of both. Our town is the county-seat of Carson county, and has about 800 population. We are anxious to get some definite information as to what it will cost to put in both a light and water plant. If you can refer us to manufacturing companies which can give us this information we will appreciate the favor.

DU PONT COMPANY TO BUILD NITROGEN PLANT.

Investigations Being Made as to Best Location for Plant to Help Meet National Unpreparedness.

In reference to the reported establishment of a nitrogen plant at Hopewell, Va., by the Du Pont Company, one of whose important explosive plants is located at Hopewell, while the company has made no official announcement, information from an authoritative source has been obtained by the MANUFACTURERS RECORD regarding the matter. It has been stated that the Du Pont Company had made plans, before the war, to erect a plant for the fixation of atmospheric nitrogen, and as no water-power sites were available in this country, it was proposed to erect a plant outside of the United States. When the war began this plan was abandoned, and last spring the company asked Congress to amend the water-power laws as to make it possible for the proper authorities to authorize this use of some of the power which is now going to waste. It was proposed, in exchange for this, to supply the Government with all the nitric acid it might need at its own price in time of peace, and to agree that it should have virtually the entire output in time of war.

Congress did not act on this offer, though it was submitted in the form of a bill which the company deemed would safeguard the nation's interests. Shortly after this offer was made Congress passed a bill authorizing a Government-owned plant.

The Du Pont Company is said to realize the absolute necessity of arranging for a supply of nitric acid from some source other than the distant nitrate beds of Chile. It recognizes, as the MANUFACTURERS RECORD has urged from the beginning of the discussion, that the country's present condition of unpreparedness is an unanswerable argument in favor of arranging for such a supply, so that it cannot be interfered with in time of war.

The company is reported as going ahead with its investigation into the possibilities of establishing a commercially successful plant, either with or without the much-desired cheap hydro-electric power.

Pending determination as to the most satisfactory source of power, it is reported to be the present intention of the company to erect an experimental plant at what, upon further investigation, may prove to be the most desirable site.

Graphite Deposits in Alabama.

A report of the results of a preliminary investigation of the graphite deposits contiguous to the Central of Georgia Railway in Coosa and Clay counties, Alabama, was recently submitted to J. M. Mallory, industrial agent of that railway, Savannah, Ga., by T. Poole Maynard, Ph.D., Atlanta, Ga., consulting geologist of the Central of Georgia Railway. The location of the deposits with regard to railway transportation, topography and water supply and physical and chemical descriptions of the deposits, are included in the report. Conditions bearing on the commercial development of each deposit are brought out in discussions of individual properties.

As a whole, these deposits consist of a small crystalline flake contained in a ground mass of quartzite, green sericite and associated similar materials. In this area the hard and soft flake are both found. The soft flake is best adapted for use in the manufacture of pencils, lubricants, etc., while the hard is suited to the manufacture of crucibles. In the latter connection, clays of high pyrometric quality, suitable for crucibles where extra high incombustibility is desired, are found in the vicinity of Perry, Ga., while sands of extreme fineness are found along the Central of Georgia Railway in the vicinity of Opelika, Ala. These materials, graphite, clay and fine sand, are the essentials in the manufacture of the articles named. They are in close proximity to each other, affording the necessary elements for the manufacture of graphite refractory materials, such as crucibles, retorts, dippers, stirrers stoppers, nozzles, etc.

The proportion of graphite present in these deposits will average about 3 per cent. The beds have a thickness of as much as 20 to 40 feet.

At present the plant of the Ceylon Graphite Co. is nearing completion. In full operation its capacity will be about 800 tons daily of crude graphite rock.

Friendship the Best Policy, But Defense Must Not Be Neglected

FOURTH FOREIGN TRADE CONVENTION AT PITTSBURGH VOICES SENTIMENT THAT UNITED STATES MUST DO ITS GENEROUS UTMOST TO REHABILITATE EUROPE, BUT MUST ALSO PREPARE TO MAINTAIN ITS RIGHTS IN WORLD MARKETS.

By CRITTENDEN MARRIOTT.

Pittsburgh, Pa., January 27.

Friendship the best policy. Unmistakably the sentiment was voiced by the Fourth Foreign Trade Convention at its sessions in Pittsburgh, January 25-27, not merely nor even chiefly on the ground of humanity—though humanity was not forgotten—but on the broad ground that friendship would pay, and that the fullest and most generous aid that the merchants and manufacturers of the United States could offer to stricken Europe would pay for itself over and over again in sheer dollars and cents.

The convention comprised business men of all grades, presidents of great banks and great corporations sitting side by side with men who exported motor trucks from Texas, with men who made glove fasteners next door to Potash and Perlmutter in New York, and with men who rake the Pacific for pearl shell to make buttons. All had been drawn together by a common desire to learn how to obtain for themselves and for the United States a fair share in the enormous foreign trade of the world, now in process of radical readjustment. All advocated friendship to competitors (who would also be customers), and none advocated commercial warfare. But all wanted to be prepared for war, whether military or commercial, was the one chiefest guarantee of peace.

It was an enthusiastic convention, very different from the small assemblages chiefly of economists, who met in Washington in May, 1914, just before the breaking out of the great war, and initiated the demand of the United States for its fair share in the export trade of the world. The thousand and odd delegates who assembled at Pittsburgh were not economists, though there were plenty of economists among them. They were business men who had fought their way up in the domestic trade in their respective lines and who knew by experience the difficulties of the route, and who wanted every particle of information they could get to aid them in their venture into the export field.

It was also an amazingly unanimous convention. It was not a "keynote" convention, in which the leaders took pains to tell the delegates at the outset what they were expected to advocate. A keynote was sounded, indeed, but it was sounded almost at the end of the convention (at the banquet after the close of the most important sessions), and hence it was a summation of the individual expressions of the delegates rather than a guide for the development of those wishes. It was, therefore, a really amazing proof that the delegates and the country were thinking along the same lines that practically every speaker—and there were literally hundreds of speakers—took the same general line. Scarcely one failed to say in one form or another that Europe must be aided to rehabilitate herself; that she was our best customer, and always would be, and that we could no more afford to let her stay financially crippled than any individual merchant could afford to let his best customers remain bankrupt. Restored Europe would be a competitor, yes; but it would also be a customer. In the past it had bought 80 per cent. of our exports, and it would be very poor business to let an 80 per cent. customer remain crippled because we feared he would compete for our 20 per cent. customers. "The American people," said Mr. Farrell, "will be prompt to recognize the fact that the poverty of Europe cannot contribute to their welfare any more than the misfortunes of their commercial and industrial rivals can promote the prosperity of their foreign trade." And in saying this he summed up the feelings of the convention.

As to how Europe should be aided opinion was again unanimous. We could best aid Europe by aiding ourselves. Not merely by making profits on the goods and the labor-saving machinery with which we equipped them, but also by lending money freely to their several governments, by giving long and plentiful credits to their individual business men, and by financing enter-

prises within their borders. Each and every one of these means would react to our benefit.

That long-time credit would be essential was taken for granted by the convention. The demands would be too enormous to be satisfied in any other way. "At least \$5,000,000,000 worth of property will have to be replaced," said Mr. James A. Farrell. "It is figured," said Mr. W. W. Nichols, chairman of the United States Industrial Commission to France, "that \$600,000,000 will be required for the replacement of industrial property in the French war zone alone. In the replacement of textile machinery alone between \$75,000,000 and \$100,000,000 will have to be expended." France will require long-time credit from the very nature of the case. Without it rehabilitation will be slower and the revival of the purchasing power of our customers will be retarded. And the business may go elsewhere. "The banker will, as usual place his own estimate on the personal character of the applicants."

Not quite so obvious perhaps to the general public, though very apparent to the delegates, was the advisability of loans to foreign governments and investments in foreign enterprises.

But the convention wanted to know, are these investments safe? That depends! So far as the government securities go, they are absolutely safe, in the opinion of every banker who addressed the convention. Festus J. Wade, president of the Mercantile Bank of St. Louis, gave reasons for his faith. All the enormous expenditures of the war, he said, all the huge billion-dollar loans, all the wreck and ruin have run the debts of the allied nations up to "only about three-quarters of 1 per cent. of their natural wealth, while the debt of the United States at the close of the Civil War was 18 per cent. Beyond peradventure of a doubt, these loans will be paid at maturity and will prove prime investments for the public."

Investments in private enterprise stand on a slightly different basis. In these, as in all enterprises, there is no guarantee of success. Judgment is always necessary, and the advisability of each investment must be judged on its merits.

One thing, however, must be remembered. According to Mr. Farrell, the old distinction between loans made for governmental purposes and those made for industrial investments has largely passed away. Under stress of war European governments have gone into business and have become the largest importers in all history—and may continue to be so after the war. Other loans—for instance, those made by China and by the Latin-American countries—are so directly related to works of public importance and national development requiring the importation of materials and machinery that they are, strictly speaking, industrial rather than governmental.

The point, however—and it was brought out very clearly before the convention—is that all investments in foreign countries exert the strongest sort of pull for other American trade. The first steam railway in Korea, for instance, was built and its equipment ordered from the United States as a result of the far-sighted activity of an American business man. The track was the American gauge, 4 feet 8½ inches. When this road was extended by the Japanese the American gauge was still used, and when the South Manchurian railway was linked up with it the American gauge was continued. American locomotives and rolling stock have accordingly a preference in that market, and the bulk of the equipment is manufactured in the United States.

Trade, therefore, follows investment as well as the flag. But for it to follow effectively two things are necessary, the convention was told. Commercial treaties must be made to secure for us a fair deal as compared with competitive nations, and a merchant marine to transport our goods must be created. Both these subjects were discussed with the most intense interest.

It may be mentioned, incidentally, that the conven-

tion did not seem to think much of President Wilson's shipping bill and its \$50,000,000 appropriation. Several delegates slammed it hard, and not one said a word in its defense. Norway, it was pointed out, was today building in a single American shipyard ships whose aggregate value was a good deal more than the entire \$50,000,000 United States appropriation.

The difficulties in the way of building up an American merchant fleet were clearly brought out. The main question seemed to be whether America could afford to build ships—whether ships built today, under enormously enhanced costs, could possibly be run at a profit under American regulations after the war ended and freight rates dropped. Mr. Powell seemed to think that the demand for ships would be great for at least five years after the war, after which a severe slump would inevitably come that would wipe out all profits. Capt. Robert Dollar of San Francisco, the largest individual shipowner in America, thought that anyone could run a ship now, but that nobody could do so after the war ended unless the legislative restrictions imposed by Congress were removed in the meantime. According to Captain Dollar (and other speakers backed up all his assertions), our laws are filled with useless and vexatious restrictions, imposed by no other nation, that increase the cost of running an American ship by at least \$10,000 a year, exclusive of the wage cost. Further the so-called seaman's act has so enhanced the wage cost that a ship that the Japanese run for \$9000 costs the British \$13,000 and the Americans \$39,000. These conditions have practically driven the American flag from the Pacific. From 26 per cent. of the total foreign trade the American share has dropped to 2 per cent., while the British share has increased from 29 to 37 per cent. and the Japanese from 26 to 51 per cent., the rest going to nations that were not known on the Pacific coast at all before the war. Any effort to repeal this law, however, would undoubtedly meet with bitter opposition from the labor unions.

With a merchant marine, with adequate commercial treaties and tariff defenses, and with investments abroad to make easy the financing of sales of American goods, only one thing, in the opinion of the convention, would be necessary to enable Americans to enjoy the full benefits of foreign trade.

Congress must take down the bars and give them permission to trade.

This was the topic that roused the real ire of the convention. Everything else was accepted as being, in a way, more or less inevitable. But that Congress should have shackled American enterprise and should have so far either refused or at least neglected to strike off the bonds seemed to the delegates the acme of mismanagement and incompetency. The "Webb bill," which has been endorsed by President Wilson and has passed the House and which is now pending in the Senate, specifically declares that the Sherman act shall not apply to foreign trade. But Congress must adjourn in about five weeks, and unless the Senate passes the bill within that time the country will probably have to wait about a year to get its hands free. Meanwhile the war may end and the once belligerent powers may have gobbled much of the trade that now lies unappropriated.

Many of the problems of the convention were discussed in what were called group sessions, the convention splitting into six main bodies, each of which discussed in an informal way a particular problem. The delegates distributed themselves among these groups, each selecting the one in which he was most interested. The proceedings were give and take, each delegate asking about details as to which he desired to be informed, and each delegate answering the questions of others in so far as his information extended. Numerous "advisors," detailed by the United States Government, were in attendance in nearby rooms to confer with any and all who wanted information or advice on any subject within their purview. Probably not a single delegate went home from the convention without learning

facts of special and direct importance to his business.

Herewith is the address of Mr. James A. Farrell, chairman of the National Foreign Trade Council; also summaries of some of the other speeches of the convention and of reports submitted. In addition, there was an interesting report made by the Committee on Merchant Marine, composed of Capt. Robert Dollar, Mr. James A. Farrell and Mr. P. A. S. Franklin; a speech by Lewis E. Pierson, chairman Irvins National Bank,

New York city, on "American Banking in Foreign Trade;" addresses by C. K. McIntosh, vice-president of the Bank of California, on "Foreign Investment as an Aid to Foreign Trade;" by J. W. Powell, president Fore River Shipbuilding Co., Quincy, Mass.; by J. D. Ryan, president Anaconda Copper Mining Co., and by B. F. Harris, president First National Bank, Chicago, Ill., on "The Farmer and Foreign Trade, the World Market for Agricultural Products," and others.

"The Future of American Foreign Trade"*

By JAMES A. FARRELL, Chairman National Foreign Trade Council; President United States Steel Corporation, New York.

No more convincing proof could be given of the importance which external commerce has assumed in the industrial, commercial and financial activity of the people of the United States than the composition of this Fourth National Foreign Trade Convention.

From a body of specialists and experts who met at Washington in May, 1914, to compare notes of their experience in the promotion of American trade abroad, and to impress on their fellow-citizens the need of a larger outlet for American products, the attendance at successive conventions has broadened and become more comprehensive.

There has probably never been assembled under one roof a body of men so thoroughly representative of all the national interests of production, distribution and banking as that I am now addressing. Every section of the country has its spokesmen here; every department of manufacture, every branch of merchandising.

There are representatives of agriculture, of mining, and of transportation; of the finance that is the handmaid of foreign commerce, there are with us and of us some of the most distinguished exponents.

When our first convention met there was depression in most of our staple industries; there was a large and steadily growing mass of unemployment. The keynote of that meeting was the relief of adverse domestic conditions by the opening of new markets abroad for the products of American workshops. This was the purpose for which the National Foreign Trade Council was founded, and on whose pursuit all its efforts have been concentrated.

Circumstances, then unforeseen, have changed the whole aspect of our foreign commerce, but the problems of its normal development are with us still.

For the calendar year 1913 the domestic exports of the United States amounted to \$2,448,000,000; for 1916 they have apparently exceeded \$5,480,000,000. Enhanced values have had a good deal to do with this stupendous gain, and its chief element has, of course, been supplies directly or indirectly contributory to the conduct of war. But there has been a solid increase in the proportions of our trade with the neutral nations; there has been, above all, a demonstration of the vast possibilities of the productive energy of the United States.

In two years of European war this country has received for its exports \$4,000,000,000 more than it would have received had the average of preceding normal years been maintained. The result has been that the United States has exchanged the status of a debtor for that of a creditor nation; that it possesses one-third of the world's gold; that its loans to other nations total over \$2,000,000,000.

That the problems of financing the foreign trade of the future—of placing the loan where the trade will follow it—has been greatly simplified needs no demonstration. But the necessity for expanding the normal proportions of our sales abroad will also be found to have become more acute. Many American industries have had to increase their capacity to be able to fill war orders. The standard of employment has reached its maximum, and so has that of wages. Labor has been drawn from the farm, the forest and the mine to meet the abnormal demands of manufacturing production.

When the period of hectic industrial activity, of inflated prices and payrolls of unheard-of amount comes to an end with the conclusion of peace, we shall have to reckon with conditions in Europe imperatively de-

manding the speedy resumption there of a foreign trade which experience has shown to be inseparable from domestic prosperity. Though hampered by the tragical reduction of man-power, the advent of women into the ranks of the workers in machine shops, the gain in efficiency from the wider and freer use of automatic tools, and the intensive co-operation both in production and distribution which will be universal, instead of partial in its application—all these will go far to reinforce the reduced vigor of European competition in the markets of the world.

With us, entry into foreign trade is no longer a matter of choice. The distinction between domestic and foreign commerce is rapidly disappearing. No enterprise large enough to be called national can be clipped short at the boundaries of the republic. When, in the first week of the war, the almost complete suspension of our export and import trade dislocated all the activities of the home market, the American people had an object-lesson which they are not likely to forget, showing that foreign trade is a vital element in domestic prosperity. The problems that will come with the economic reconstruction of the countries now at war are bound to bring into bold relief the interdependence of nations. Our country will find the path of duty and opportunity coincide in helping to make that fact clear. Accepting the sound principle that commerce which will stand the test of time must rest on a fair exchange of values, our rightful share of the world's trade will be that to which our natural resources, developed by our enterprise and skill, entitle us. In short, the fitness of our products to meet the requirements of the rest of the world must continue to be the measure of the expansion of our foreign trade.

The opportunities of the near future are sufficiently alluring. There will be a period of industrial reconstruction for Europe, and the retarded development of neutral countries is likely to resume at least its former rate of progress. In this latter field there is room enough for all—the more so because in countries still bare of the appliances of modern civilization the process of equipment is apt to be a cumulative one. The new facilities of transportation, production or public convenience not only create a demand for more, but help to create the wealth needed to pay for them.

We have seized unfairly the commerce of no people; we have taken no mean advantage of the industrial extremity of others. But we have accepted the responsibility of carrying on enterprises which had been begun by European capital whose further supplies were interrupted. Our entrance into new fields of business enterprise abroad has been of signal benefit, not only to the countries where the investments have been made, but to the original investors whose work we have taken up at the point where they were compelled to lay it down.

It is significant that many of the orders for munitions now placed in this country provide that, should their fulfillment be interrupted by the close of the war, delivery will be taken of an equivalent amount of material for peaceful purposes. Thus, as the war demand abates our mines, forests and workshops will be drawn upon to aid in the reconstruction of great devastated areas and the re-equipment of ruined industrial plants. All this will mean new drafts on our surplus capital, but it will also mean prosperity to our productive industry, and will thus provide a profitable return on the capital it employed. A distinction used to be drawn between government loans yielding annual interest and industrial loans usually carrying a preference for the purchase of the goods of the lending nation. But under the stress of war European governments have become the largest importers of all history. Then there are

governments like those of Latin-America and China, which are so directly identified with works of public improvement and national development requiring the importation of materials and machinery that their borrowings become, strictly speaking, industrial.

It is difficult to realize the colossal scale on which Europe will have to borrow to make good the destruction of war. At least \$5,000,000,000 worth of property will have to be replaced, and the demands of the work of reconstruction will be too vast to be met by private enterprise. The first demand will naturally be for houses to shelter the homeless thousands whose native villages have been reduced to shapeless ruin. The next will be for the surplus of such material, machinery and equipment as can be used to fabricate other machinery and equipment needed for industrial reconstruction and the introduction, where possible, of mechanical appliances to perform work which used to be done by hand. The process will naturally differ from that pursued in the case of a factory destroyed by fire, whose owners, after rebuilding, first install the equipment needed to resume its most profitable production.

In the presence of the gigantic needs of the war-swept territories in Europe and of their poverty-stricken populations, any application of the old-time methods of competition sounds trivial.

Co-operation on the broadest and most generous scale and in the most sympathetic spirit must be the rule, if economic recovery is to be quick and thorough. We shall greatly facilitate international co-operation for the general welfare of the world by establishing a co-operative system of selling in foreign trade among ourselves. We shall greatly lessen the possibility of perpetuating in the domain of commerce the bitterness and hatred engendered by the war, if we refuse to be drawn into any convention, agreement or understanding that would make us parties to a boycott of the commerce of any of the nations now arrayed against each other. To meet any attempted discrimination against the exports of the United States we shall be free to choose our own weapons and to invoke the aid of our own Government. But the American people will be prompt to recognize the fact that the poverty of Europe cannot contribute to their welfare any more than the misfortunes of their commercial and industrial rivals can promote the prosperity of their foreign trade. I see no reason to doubt that they will prepare to do their part in laying the foundations of a permanent peace on the firm basis of mutual respect and evenhanded impartiality and fairness in the dealings of commerce.

This convention has resumed the practical discussion of foreign trade promotion after taking into consideration international developments occurring since the Third National Foreign Trade Convention at New Orleans last January. That convention, like its predecessors, favored the legislative action necessary to build up an American merchant marine, and specifically approved of the creation of a Government Shipping Board; it gave expression to the conviction that national welfare depends upon the participation in foreign trade of a steadily increasing number of smaller manufacturers and merchants, all gaining a wider market as a protection against recurring periods of domestic depression and assuring greater stability of labor employment; it protested against the application of the anti-trust laws of the United States to combinations of American exporters formed for the purpose of meeting combination among their foreign competitors; it recognized the need of a more elastic tariff system, for the purpose of countering preferential tariff agreements that the European allies in the war may deem essential to form after the conclusion for peace, and it counseled the investment of American capital abroad in such manner as to assist the development of foreign markets and stimulate an enlarged demand for American products.

Since the last convention two new official agencies have been created for the furtherance of a national foreign trade policy—the United States Shipping Board and the Tariff Commission. With the limitations which surround the action of both, it would be too much to expect any remarkable results from the work of either. But, composed as they are of men of experience, tact and discrimination, there is every reason to assume that they can render valuable service to the common cause. That cause is being also served with ability by the Department of Commerce, the Federal Reserve Board and the Federal Trade Commission. All of these boards and commissions owe their being to legislation passed

*Address by Mr. James A. Farrell, chairman National Foreign Trade Council; president United States Steel Corporation, New York, at the banquet of the Fourth National Foreign Trade Convention, William Penn Hotel, Pittsburgh, Pa., Friday evening, January 26, 1917.

in response to the demand of business organizations that the executive and legislative departments of the Government should be more responsive to the needs of commerce and industry.

While they are largely composed of business men, they must look to organizations like the National Foreign Trade Council and an assemblage like that now before me for an interpretation of how the Government may most effectively aid and further the business enterprise of its citizens. Whatever the recommendations you may see fit to make toward this end, I believe you may rest assured that they will receive at least respectful consideration.

But I cannot help thinking that, above and beyond the bearing of our domestic policy on the outlook for our foreign trade, we must set ourselves to grasp the larger and more vital principles of international co-operation. It is a debatable question whether the United States can become a member of an International League of Peace for the prevention of further war, but it is not at all doubtful that we can render an invaluable service to the establishment of lasting concord among the peoples of the earth by setting our face against anything that looks to the perpetuation of commercial war in peace.

The spirit in which our merchants, manufacturers and bankers addressed themselves to the relief of the sufferers by the historic disasters at Chicago, Baltimore and San Francisco is the spirit of generous accommodation in which we must approach the needs of Europe after the war.

Here the path of devastation has had a broader sweep and more tragic accompaniments. The forces of destruction have been fed by draining the very life's blood of the nations in capital and man-power. Wealth has been lavished on the annihilation of wealth; the savings of one generation have been used to impoverish another. But from the whole ghastly conflict will emerge a regenerated Europe—a Europe with nobler ideals and higher standards of attainment, both in spiritual and material things.

In cold, prosaic fact, however, it will be a Europe needing a larger allowance of credit and presumably worthy of it. That is a point about which every business man interested in foreign trade will have to satisfy himself, but it may be regarded as certain that our share of the commerce of reconstruction must largely depend on the amount of credit we are willing to grant.

At present our most pressing problem is how to produce quickly enough to satisfy the demands of export trade. After the war the financial aspect of the task will come into the foreground, and the huge requirements of the necessary loans and credits will provide a new chapter in our national experience.

But it is certain that, on the readiness with which these requirements are met must depend the future of our foreign trade, and, consequently, the prosperity of domestic industry. In sober truth, the motto of this convention, "Greater Prosperity Through Greater Foreign Trade," might with entire correctness be made to read:

"No Enduring Prosperity Without Foreign Trade."

"First Principles in Foreign Trade"

EDWARD N. HURLEY, Chairman Federal Trade Commission.

On behalf of the Federal Trade Commission, I want to express my appreciation of the great work that has been done by the National Foreign Trade Council in educating the American people to lay aside their provincialism and to prepare for the commercial battle that we all know we will have to meet in winning our share of foreign trade.

Fundamentally there are two sides to the shield of foreign trading: The one is the efficiency of the American manufacturer at home; the other is co-operation among American business men in marketing their goods abroad.

Mere efficiency at home will not bring to American business men that share of foreign trade which they deserve. However efficient we may be in production and in merchandising in our domestic market, we cannot succeed without co-operation in selling our goods abroad. It is, therefore, imperative that American business men shall be permitted to co-operate for the purpose of developing their foreign markets.

For this reason it is extremely gratifying to me that President Wilson has taken a positive stand in favor of the Webb bill. It is my belief that this bill will become a law at the present session of Congress, and with its enactment into law will pass all doubt as to the interpretation of our anti-trust laws in their application to export associations.

With the passage of this bill will come the real work of organization. After the Webb bill is on the statute-books a vast amount of work must be done in educating American business men in the methods of co-operation and in the complicated details of selling goods abroad.

With the development of our banking institutions in foreign countries we must not take the position of the English manufacturer of 50 years ago. We must not wait for orders to come through our banking connections. It is a well-known fact that for a number of years English manufacturers received orders amounting to millions of pounds Sterling from abroad through their banks. They put forth little effort in merchandising, and did not attempt or think it necessary to establish selling organizations. Later, when Germany organized an efficient selling force and made a drive for foreign business, she was, in a comparatively short time, the master of a large part of the foreign trade of the world and a serious competitor of England.

We can no longer regard the foreign market as a place for merely dumping our surplus goods, nor can we remain at home waiting for orders to come to us.

The American merchant abroad, backed by a strong co-operative selling organization, must master the language and customs of the peoples to whom he sells, must cater to their needs, and master foreign trade as a particular and highly important field for American business activity. I have faith in the constructive energy and resourcefulness that underlies American business.

Our Government, on its part, is coming to recognize its obligation to American business. The Webb bill is important in itself, but it is also typical of the new attitude which the Government is taking toward business. In the past the Government's attitude has been negative and hostile, and seldom, if ever, constructive, but during the past few years conditions have changed rapidly.

When the Federal Trade Commission began its work it found that American business did not have adequate machinery for gathering information. When we endeavored to determine the exact state of affairs in an industry we found that neither the Government nor the industry itself could furnish us with any comprehensive and adequate data. The difficulty, we found,

was lack of adequate cost accounting systems in our factories and merchandising establishments.

Mr. Hurley then detailed the comprehensive efforts that the Federal Trade Commission had made, in co-operation with the business interests of the country, to work out a standard, uniform set of rules and regulations with the view to making all examinations and audits as complete as possible.

With an adequate cost accounting system in the industries of this country the gathering of information would be made comparatively easy and the task of the Government in its solution of public problems would be greatly simplified. Cost accounting would also be of great benefit to industry itself, and anything which makes industry more intelligent and efficient ultimately benefits the public.

If business is made more intelligent it will become more fair, and there are many practices existing now in our industries which business men, either individually or through their trade associations, can and will correct if the evil effects of these practices are brought to light. There are, however, some unfair practices which only the Government can correct. The law under which the Federal Trade Commission operates authorizes us to prevent unfair methods of competition. When private effort fails, the Government must step in in order to make business fair, and under ordinary conditions if competition is made fair competition will take care of the interests of the consumer and the business man alike.

The problems now before the business men and the Government are not so complicated but what they can be worked out, and in a reasonable length of time. The Government has shown that it is willing and anxious to co-operate with business. It is now the duty of the business men of this country to do their part. Successful co-operation requires a friendly spirit on both sides if we are to accomplish real constructive work. When business men request advice in advance as to some particular step they wish to take they should present to the Government an intelligent statement of the facts; then the Government should give advice in advance as to what business men should or should not do.

My ideal for the Federal Trade Commission is that it shall become the common meeting ground of Government and business, and that by means of its machinery the foundations of industry shall be laid more secure, competition shall be made more intelligent and fair, business men will have more comprehensive and wider vision of the public interest and the relation of industry to the public and that Government on its part will, on behalf of the public, bring to business its constructive aid.

With the Webb bill on the statute-books—with American ships on the high seas, with our banks establishing branches abroad, and with American capital freely investing in foreign enterprises—our manufacturers will have better facilities for the development of overseas business than ever before. It will then rest with such men as you whether the United States shall lose ground, or whether it shall advance from its present splendid position to new achievements.

The Foreign Trade Aspect of the Tariff

WILLARD STRAIGHT, Vice-President American International Corporation, New York City.

We realize that we cannot hope to maintain our exports at their present scale. We shall sell less, and Europe, to gain back its gold, will endeavor to induce us to buy more. We know that we must endeavor, as far as possible, to continue the business which has been built up during the past two years. The tariff may be made to serve a constructive purpose. It should be and can be made an instrument not only to protect our industry and to safeguard a home market—it may be utilized for the maintenance and development of our export trade.

The tariff, whatever its local effect may be, is, as it affects foreign trade, essentially a national issue. The economic mobilization of Europe has been perfected. Both groups of Allies contemplate preferential tariff arrangements between themselves. Both groups must necessarily strive not only to restore, but to increase their trade with neutral markets.

The treaty fabric under which the major part of the trade of the world was conducted prior to 1914, with its wide extension of "favored nation" treatment, has been virtually destroyed by the war. Our own commercial arrangements with the belligerents have not been altered, but we have at present no commercial treaty with Russia. Our relations with some of the other powers rest on bases which are antiquated or improvised. In any case the belligerent powers will necessarily recast their arrangements with the United States to conform to the provisions of the instruments on which their own mutual relations will be based. The tariff systems of the world will be revised to meet new conditions. To pay interest on enormously increased national debts, tariff duties as well as direct taxation must be increased. To endeavor to obtain the sums required merely by fresh taxation would be to place an undue burden upon capital and industry. Fresh wealth must be created by the development of productive power.

Such stimulated production must of necessity find an outlet in the export trade.

Although Great Britain has not as yet ostensibly departed from her traditional "free-trade" policy, duties have been increased, charges have been imposed on articles hitherto admitted free, and the importation of others has been prohibited. These changes have been made to raise revenue, to curtail luxury and to give additional space on British ships for the transportation of necessities. But there has been a noticeable trend toward the idea of a tariff for protective purposes. It seems possible, therefore, that a tariff or economic partnership between the United Kingdom and the British colonies, and preferential arrangements between the British Empire and the Entente Allies, may be established. Similar arrangements may be made by the Central Powers.

If the European groupings, as a result of the war, are either collectively or individually to utilize bargaining tariffs as they have in the past, under their maximum and minimum, or general and conventional systems, it is essential that the United States should be in a position to protect its position. The Entente Allies, for example, apparently contemplate post-bellum discrimination against the trade of the Central Powers. It has been stated that every effort would be made to continue close commercial relations with the neutral nations. Will the maintenance of such relations, however, be made contingent upon the willingness of neutrals to discriminate against German trade? The best method of avoiding such a dilemma is to realize that it may arise. If this or other equally difficult situations are possible, should we not now consider measures which will render them improbable?

The trend of economic policies in Europe is manifest. The need for maintaining our export trade is obvious. The United States will be the richest market in the world after the war. The United States will be the most serious competitor which European industry will be obliged to meet in its campaign for recouping the losses of the present struggle. This war has demonstrated the fact which some of us in this country have heretofore been disposed to ignore—that international trade, like domestic trade, is essentially an exchange of commodities. We cannot hope that we shall continue to sell some \$3,000,000,000 more of goods than we buy. Commercial relationships, to be permanent, must be mutually advantageous. If we wish to sell our goods abroad we must in turn purchase from foreign producers. Our purchasing power, therefore, is our first line of economic defense. To utilize it as such we must be able intelligently to regulate the importation into this country of goods which other nations desire to sell to us. By so doing we may demonstrate the advantages which they may gain by purchasing articles which we in turn desire to export. We need a "bargaining" tariff. A "bargaining" tariff, to be effective, should be flexible. It should be possible to apply its provisions to meet situations as they arise. Our present tariff laws are inadequate from both points of view. Whatever be the underlying principle of the tariff, it should possess adequate resources for the encouragement of our foreign trade and its protection from undue discrimination.

It is not the purpose of this paper to enter into a general discussion of our tariff problems to attempt to justify either a protective tariff or a tariff for revenue only. A general revenue bill may be based on one theory or the other. But whatever its underlying principle, a tariff law may be so framed that within certain specified limits fixed by Congress the executive may utilize the tariff either to secure concessions for American trade or to prevent discrimination against our products, or our interests in foreign lands.

The desirability of utilizing the tariff to encourage our export trade and to protect it against discrimination was recognized by both Hamilton and Jefferson. These men were dealing with our international commercial relations in the days before we entered into our years of isolation and incubation.

Congress, in connection with various tariff bills, has from time to time contemplated the "bargaining" potentialities of the tariff. This phase of the problem, however, has received but small consideration from our legislators. The maximum and minimum provisions of the Payne-Aldrich tariff were debated by the Senate for less than an hour. This subject has not formed the basis for public discussion since the time when immediately after the Napoleonic wars our markets were

flooded with British manufactures and our trade discriminated against by the nations of Europe.

Under our present tariff 60 per cent. of the articles imported into this country are admitted free of duty. Ninety-five per cent. of the value of imports from South America, with the exception of Cuba, the same proportion of imports from Central America and the West Indies; 90 per cent. of the imports from Africa; 97 per cent. of those from Oceania and 70 per cent. of those from Asia now enter our ports without payment of duty.

Total value of imports from all countries during year 1915.....\$1,648,386,280.00
Free of Duty.....1,032,863,558.00
Dutiable.....615,522,722.00
Percentage free.....62.66%

PRINCIPAL DUTIABLE ARTICLES IMPORTED IN 1915.

	Total Value.	Amount Duty Collected.	Average Ad Valorem Rate of Duty.
Sugar.....	\$155,204,278.00	\$49,282,113.17	31.75%
Tobacco, and manu- factures of.....	29,499,102.00	24,875,245.93	84.33%
Manufactures of cotton	46,615,765.00	19,946,727.56	42.79%
Spirits, wines, malt liquors and other beverages.....	24,051,535.00	11,262,067.45	46.82%
Fibers, vegetables, etc., and manu- factures of.....	30,399,817.00	9,919,212.56	32.63%
Iron and steel, manu- factures of.....	15,153,890.00	3,392,414.42	22.39%

PRINCIPAL DUTY-FREE ARTICLES IMPORTED IN 1915.

Coffee.....	\$106,691,818.00
Hides and skins.....	104,188,187.00
Indian rubber, gutta percha and substitutes.....	87,122,031.00
Silk, and manufactures of.....	83,401,815.00
Fibers, and manufactures of.....	69,589,492.00
Wool, etc.....	67,511,316.00
Wood, and manufactures of.....	56,230,597.00
Chemicals, drugs and dyes.....	49,364,969.00
Copper, and manufactures of.....	31,477,949.00

The Underwood-Simmons bill, it is true, empowers the President to negotiate reciprocal trade agreements, but where we have nothing to give we cannot hope to secure any advantages from others. The present return from customs revenues, moreover, is inadequate. To meet increased expenses of Government it is now proposed to increase the duty on certain articles and to impose a duty on others now entering duty free. Our present schedules, together with such changes as may be made in the near future, therefore, must be regarded as a minimum rather than a maximum tariff. Where increased duties are advocated it is impossible to contemplate reductions from present rates which the negotiation of reciprocity treaties would entail.

The present agitation for increased duties is apparently being considered without reference to the effect which the alteration of our present schedules may have upon our export trade. It has been suggested that a duty be placed upon coffee. This would greatly increase our revenues. What effect would it have on our exports to Brazil, from which country we derive our principal coffee supply? By virtue of a Brazilian executive act we now enjoy a 20 per cent. ad valorem preference on 16 articles. We have a 30 per cent. preference on flour, which enables us successfully to compete in the northern part of Brazil with Argentine flour, which would otherwise hold a monopoly in the Brazilian market. Brazilian sugar exporters, however, desire to secure the Argentine trade. They advocate the free listing of all flour (nullifying the American preference) in return for an Argentine preference for Brazilian sugar. The imposition of a duty on coffee might—undoubtedly would—lose for our exporters their present preference in Brazil. If such a duty were imposed, however, and rescinded as far as Brazilian coffee was concerned, not only would the breakfast table be free

from a burden, but in return Brazil might grant additional concessions to American products. Such an arrangement, moreover, would be reciprocal and permanent rather than resting as it does today on the voluntary concession of the Brazilian executive.

Aside from the arrangements with Brazil above referred to, we have a reciprocity treaty with Cuba. It was recently imperilled by legislation free listing sugar, subsequently revoked. Our tariff as it stands today, however, is barren of trading margin.

The general revenue bill of 1916 created a commission to be known as the United States Tariff Commission.

This body, while it may furnish the expert knowledge which would be required as the basis for utilizing a bargaining tariff, if one were adopted, has no power to alter the present schedules. This requires Congressional action.

As matters now stand, therefore, there is about to be created a body that will study and report upon tariff conditions. There is the authority for the negotiation of what are in effect reciprocity treaties, but no means whereby reciprocal arrangements may be quickly concluded, nor trading margin to provide for the concessions upon which they would necessarily be based. It is apparently imperative that additional revenue must be secured from the tariff or from other sources.

Since action must be immediate, it is to be hoped that it will be intelligently designed, not only to meet our immediate financial requirements, but to serve a broader and more constructive purpose in the maintenance and protection of our foreign trade.

To secure the desired result two lines of action are open. Either the general schedules should be increased, in order that concessions thereunder may be offered, or the present schedules, with such changes as may now be made, should serve as a minimum tariff, and provision be made for a graded increase on certain articles to be selected with a view to the balancing of our export and our import trade. The former alternative is manifestly impracticable. Congress, and the country at large, would be reluctant to increase all duties and remove numerous articles from the free list with a view to later granting concessions thereunder. The possibility of concessions under reciprocity arrangements is calculated to create uncertainty in the minds of business men. The second plan, therefore, seems the most feasible. The precedent for such legislation has already been established under previous revenue bills. The suggested Senate amendment to the Underwood bill, with certain amplifications, vesting in the President the power to impose a surtax on certain selected articles, or a duty on certain articles ordinarily on the free list, would give both the power to prevent discrimination by the threat of retaliation and the possibility for quick and effective action.

The adoption of such legislation, the creation of the Tariff Commission, the co-ordination of the work of this commission with the Departments of State, Treasury and Commerce, would give us the machinery which is required. If the principle of a bargaining tariff is a sound one, the necessity for the adoption of this principle is immediate. We do not know what the outcome of the European war may be, nor what its effects may be upon the tariff systems of Europe. We do know that these systems will be radically altered, and that duties will be largely increased. Our difficulties are in any case sufficiently great. It is folly not to adopt measures which are so obviously calculated to protect our interests.

"Industrial Reconstruction in Europe"

W. W. NICHOLS, The Allis-Chalmers Company, New York City.

Mr. W. W. Nichols, The Allis-Chalmers Company, New York city, who was chairman of the United States Industrial Commission to France, spoke of the work of the commission and reviewed in a general way the industrial reconstruction in Europe which is to follow the ending of the war. He said, among other things:

"If the commission discovered one thing beyond question it was the willingness of France to co-operate with a people she understands in order to establish, on a sure foundation, true commercial reciprocity.

mers Company, New York City.

"We have many evidences of this desire, and believe that none but ourselves may destroy the opportunity offered us. A right treatment of this opportunity, we feel, will have a potent effect on 'dumping' and similar measures destined to limit, if not destroy, our trade abroad according to the theories of the present day. It would also modify such theories as, for example, the one which predicts an injury to result from the sale of our labor-saving machinery to future competitors to strengthen their competition.

"France will require long-time credit, and so much

of it that it must concern the banker, who will, as usual, place his own estimates on the personal character of the applicant.

"If we are agreed that we are equally willing to enter into a Franco-American reciprocity, according to which we purchase freely from France so that France may purchase largely from us, then we are ready to consider the character of the demand in this prospective reconstruction.

"When we reflect that France has today in her possession over 750 towns in the war zone demolished wholly, or in part, with a greater loss otherwise than this implies, and that more than three times that number of towns besides four of her cities of over 100,000 population each are still held by the Central Powers, we may comprehend somewhat the magnitude of her problem of rehabilitation, not of buildings and their contents, relatively a small matter, but the difficult reorganization of working forces, methods, and all that which composes and sustains industrial life. The commission in its report publishes a list of industries, furnished in detail by the National Commission for the resumption of activities in the invaded district. This list includes under textile, 25 different industries; under agricultural, 11; under mines, metallurgical, mechanical and electrical construction, 38; and miscellaneous, 25 industries; this concerns what before the war engaged the activities of probably 1,500,000 workmen, producing perhaps \$2,000,000,000 of product.

"Furthermore, it should be noted that reconstruction in France is not by any means confined to the invaded districts; in fact, it is a fair question whether the greater task is not elsewhere.

"Plans have been made which contemplate the early development of water-power, according to official estimates amounting to approximately 750,000 horse-power,

with 3,000,000 horse-power more in prospect; a development, because largely for manufacturing purposes, which may afford immense opportunities for almost every product of American industry.

"The Touring Club of France, in co-operation with local associations and hotel men in resort sections, proposes to rehabilitate the resort hotel system along modern lines to conform closely to the American idea; this might easily create a demand for American hardware and American hotel equipment of all kinds if we choose to develop it. As this plan involves an estimated expenditure of over \$100,000,000, our manufacturers concerned can decide for themselves whether or not it deserves attention.

"France looks to us as the superior exploiter of labor-saving machinery to help her to deal with what she expects to be the most difficult phase of her reconstruction, namely, to find adequate means to offset a great deficiency in her former manual labor. She estimates this deficiency will actually be 1,500,000 men, and to this must be added serious impairment of effective personal service by the loss of limb, sight or other sense. Her dependence upon female substitutes, now saving the nation, can obviously be only a temporary expedient which as long as it lasts will restrict national progress in vitally important respects. In fact, France is so impressed with the gravity of this situation that at the outset this constituted the principal reason given for our commission's visit.

"What the requirements in this particular will be no estimate at this time can foretell. It is believed, however, that in the replacement of textile machinery alone between \$75,000,000 and \$100,000,000 will have to be expended. It is figured that \$600,000,000 will be required for the replacement of industrial property in the French war zone alone."

Passage of Webb Bill Urged

The immediate enactment of the Webb bill, establishing authorized co-operation among American exporters, was called for in a report made to the convention by the National Foreign Trade Council.

Except for certain House amendments, the elimination of which is urged, the Council declared the Webb bill is necessary to avert a disastrous condition of "European co-operation vs. American compelled competition" after the war. The report, which had the approval of the Council as a whole, was prepared by a committee consisting of John D. Ryan, president Anaconda Copper Mining Co., New York city; J. A. G. Carson, president Carson Naval Stores Co., Savannah, Ga.; James A. Farrell, president United States Steel Corporation, New York city; H. C. Lewis, manager National Paper & Type Co., New York city; William H. Russe, president Russe & Burgess, Inc., Memphis, Tenn.; Theo. B. Wilcox, Portland Flouring Mills Co., Portland, Ore., and Robert H. Patchin secretary National Foreign Trade Council, New York city.

"The doubt amounting to prohibition of the right to co-operate," said the report, "enables foreign buyers, playing American producers one against another, to obtain American raw materials cheaper than American buyers, which with the lower European labor cost, gives the European merchandise fabricated therefrom an added advantage in competition with American goods. Inability to co-operate thus confers upon our competitors a practical subsidy.

"Co-operation in export selling is imperative to meet the proposed post-bellum co-operative buying not only by groups of European industries but even by governments with the object of controlling prices.

"Co-operation would enable many smaller manufacturers and merchants jointly to develop abroad selling power and resources too costly for them to develop individually. Greater stability of export business could be obtained through co-operation, and a wider distribution obtained of the benefits of overseas sales as a balance wheel against recurring periods of domestic depression and unemployment. Increase of normal export trade is essential to defend the gold reserve from sudden drains due to increased European competition. Since the countries with which 90 per cent. of American export commerce is conducted have their own anti-trust laws, the application of the American laws to exporters merely

subjects them to a double standard and cannot reach their competitors."

The report traced the abnormal character of the present foreign commerce and described Europe's tendency toward export and import syndicates, not only permitted, but encouraged by European governments.

"Whenever the export price of American raw materials is forced below the domestic level the chances are increased for the European manufactured merchandise made from American raw materials to hold neutral markets against similar American merchandise. At best, the exportation of raw materials is less profitable to the nation than export of finished manufactures in

which labor represents a large proportion of value. The disadvantage is compounded if foreign interests can buy our natural resources more cheaply than Americans, and utilize the manufactures therefrom fabricated to block the wider outlet which American industrial enterprise and labor require in the world's markets.

"In exportation of manufactures co-operation will permit:

"Maintenance of highly organized export services at minimum cost to participants; employment of American advantages in advertising technical demonstration and 'follow-up' methods.

"Improved credit information and financing of foreign sales, more advantageous traffic contracts through greater and regular tonnage superior facilities for customs brokerage, warehousing, etc.

"Assumption, by the co-operative organization, of credit extension which manufacturers, dependent upon a quick turnover of capital, are unable to provide.

"Survival of initial losses, fatal to an individual company, which are sometimes incurred before American goods gain a foothold.

"Division of foreign business upon an agreed basis adapted to the mutual interest of all participants from the standpoint of sustained labor employment, and ability to produce at a price to meet foreign competition.

"Since the American wage scale is the highest in the world, and even the inroads of war upon the artisan class are unlikely to raise the European scale to its level, our foreign trade labors under an initial disadvantage which can be offset only by greater efficiency in manufacture and distribution. The legal doubt which retards formation of co-operative foreign selling organizations is a bar to the achievement of the efficiency attained by European rivals."

The report urged that the Senate Committee on Interstate Commerce advance the Webb bill so that Congress will not adjourn on March 4 leaving American exporters still at a disadvantage which easily can be removed by legislation, and which blocks the attainment of the efficient methods used by their competitors.

While the Council did not consider the Webb bill a panacea for all export ills, it is regarded as a necessary step in commercial preparedness. The elimination of two House amendments forbidding export associations created under the Webb bill to "trade in or market" within the United States, was urged on the ground that it would nullify the bill by preventing the export associations from buying the very goods they would be organized to export. Congress was urged to equip the bill with every possible safeguard against unreasonable restraint of domestic commerce.

The Federal Trade Commission's report is declared to establish that co-operation would not exercise any undesirable effect upon domestic prices.

"Examples of American Export Enterprise"

By way of showing the "brighter side of the shield" and informing the world that blunders in American exportation are the exception, not the rule, the National Foreign Trade Council submitted to the Fourth National Foreign Trade Convention a report on "Examples of American Export Enterprise," which said, in part:

"A situation has recently arisen affecting the reputation of American exporters which contain elements both of great good and great harm. Certain American consuls, commercial organizations and banks, have done a useful service in sharply calling attention to specific derelictions on the part of Americans in export trade.

"In itself, this has done good, but it is apparent that many newspapers, magazines and individuals have made these specific complaints the basis for generalization highly discreditable to all American foreign trade. All exporters have heard the uninitiated remark, 'well, of course, Americans do not know how to pack their goods for export, and they insist on jamming their product down the throat of the foreigner, regardless of his own tastes.'

"This opinion, although unfounded, is so widely prevalent as to be a positive hindrance to even systematic and skilfully conducted foreign trade, and there is ample reason to believe that it finds its way into foreign print to the discredit of American goods, and that it is used as a basis of selling arguments against American products. We hear little about English or German

goods being poorly packed, yet a visit to the steamship docks in normal times will show the extent of damage sometimes inflicted, for lack of proper packing, upon importations from the elder industrial and exporting nations. Controversies and disappointments as to whether contracts have been strictly fulfilled occur wherever business is done, and there is no reason to believe that it is more frequent in American than in any other export and import trade. It would be interesting to learn to what extent such complaints are kept alive in foreign markets by our competitors.

"The purpose of this paper is to call attention to the fact that some of the statements circulating throughout the world about American export methods are general statements without general foundation, and to show the brighter side of the shield by citation of examples of American enterprise which have few parallels in the history of the world's trade. The simple fact that our export of manufactures nearly doubled between 1905 and 1913, reaching in the latter year a total of nearly \$800,000,000, is in itself evidence that foreigners found it practical, convenient and satisfactory to buy American goods, while the high percentage of "repeat orders" is additional proof.

"Nobody, of course, will defend the manufacturer who tries to obtain business by the employment of unfair methods. If American manufacturers have shown better samples than the goods they intended to deliver,

such a course cannot be condemned sufficiently. We know, of course, from our own experience in this country that black sheep are found all over the world, and are, unhappily, the exclusive possession of no single nation."

The report called particular attention to the intelligence, perseverance and skill of American export of oil, steel, harvesting machinery, machine tools, agricultural and mining machinery, sewing machines, locomotives, shoes, meat and other food products, before the war, cameras, cash registers, typewriters and other manu-

factures, as well as enormous trade in raw materials which is not so competitive.

Emphasis was placed upon the growing export trade in manufactured specialties, such as safety razors, watches, fountain pens, vibrators, etc. While much of this trade is done by large companies, it was stated that there are a number of examples of what small companies can accomplish, despite that a number of small companies have achieved success, although small companies generally are hampered by doubt as to the legality of the co-operation.

"World Trade Conditions After the European War"

That the loss of public and private property in the European theaters of war represents a value of \$5,985,000,000 is the estimate contained in a report on "World Trade Conditions After the European War" by the National Foreign Trade Council submitted to the convention. The estimate is described as an approximation, the sources of information being official European government reports, trade and industrial journals, etc. The total destruction of public and private property is estimated at \$3,735,000,000 in the western and \$2,250,000,000 in the eastern theater of war. This does not include the destruction of shipping.

In detail the estimated losses in the west are as follows:

	Belgium.	France.	Total.
Buildings	\$200,000,000	\$150,000,000	\$350,000,000
Industrial machinery..	800,000,000	550,000,000	1,350,000,000
Agricultural buildings and dwellings.....	100,000,000	100,000,000	200,000,000
Agricultural implements, machinery, etc.	30,000,000	30,000,000	60,000,000
Crops, livestock, etc.	125,000,000	175,000,000	300,000,000
Industrial raw materials and ready stocks	525,000,000	375,000,000	900,000,000
Railroads	125,000,000	100,000,000	225,000,000
Government property, bridges and roads....	75,000,000	125,000,000	200,000,000
Private and public city property not included	75,000,000	75,000,000	150,000,000
	\$2,055,000,000	\$1,680,000,000	\$3,735,000,000

The loss of machinery approximately may be distributed among the different industrial groups as follows:

	France.	Belgium.
Mining	\$120,000,000	\$180,000,000
Iron and metal industry.....	145,000,000	220,000,000
Food industries.....	42,000,000	10,000,000
Chemical industry.....	20,000,000	20,000,000
Textile industry.....	141,000,000	190,000,000
Electrical industry.....	50,000,000	130,000,000
Woodworking and furniture.....	25,000,000	35,000,000
Paper making.....	9,000,000	15,000,000
	\$550,000,000	\$890,000,000

In regard to conditions in Belgium and northern France, the report says, in part:

"The destruction of private dwellings is large where fighting has taken place, but much is left that can be used in rebuilding. Foundations, in many cases, have remained intact. The roads had been frequently destroyed by retreating troops and seriously damaged by gunfire and excessive use. In many cases the foundations may be found useless and require entire renewal. Road repair will form a heavy item in budgets of smaller villages.

"The destruction of bridges can be regarded as complete in every fighting zone. Railroad tracks have been partly destroyed, but much has been repaired for the use of the army and civil population.

"The greatest enemy of industrial property has not been military operation, but enforced idleness of machinery and buildings. The furnaces of the big iron smelters were damaged by gunfire in several cases. The destruction of stocks of raw materials was extensive, not only to prevent their falling into the hands of invading armies, but through bombardments. Germany has removed part of the machinery and equipment of certain Belgian plants to Germany to obtain certain raw materials like copper or to furnish German plants with additional machinery.

"Industries cannot return, with peace, at once to full operation. Neither Belgium nor France will immediately require all raw materials, machinery and industrial building to be replaced. Conditions will be somewhat different, however, in agricultural districts where production has been continued. Fields must be worked immediately the owners return. Agricultural machinery, seeds and building material will be in immediate demand.

"After the Balkan war it took approximately one year to rebuild destroyed villages. It will require

longer in Belgium and France because of labor losses not replaceable from neighboring States. Industrial rebuilding will occupy more time. Many new industrial buildings in Northern France and Belgium may consist of temporary structures, the total expense of which most likely will not be more than one-third the total value of the former buildings.

"The immediate needs of the two countries during the first year after the war may be as follows:

	Belgium.	France.
Agricultural buildings.....	\$50,000,000	\$50,000,000
Agricultural machinery.....	20,000,000	20,000,000
Industrial buildings.....	65,000,000	50,000,000
Mining machinery.....	60,000,000	40,000,000
Iron-industry machinery.....	70,000,000	50,000,000
Food-making machines.....	3,000,000	10,000,000
Chemical machinery.....	6,000,000	6,000,000
Textile machinery.....	65,000,000	50,000,000
Electrical machinery and equipment.	120,000,000	50,000,000
Woodworking machines.....	20,000,000	18,000,000
Paper-making machinery.....	5,000,000	3,000,000

"The same applied to railroads, to ordinary roads, bridges and to other government property of which at least two-thirds will have to be placed in working order as soon as possible after the war, would cost \$175,000,000 in Belgium and \$300,000,000 in France.

"Both Belgium and France will scarcely be able to manufacture all they need for rebuilding, neither can they import everything. Slate, bricks and mineral building supplies can be supplied locally. France may see herself compelled to buy from abroad approximately three-quarters of the timber required for rebuilding, while practically all needed by Belgium will have to be imported. Glass for windows will have to be imported. Belgium will be able to supply a larger part herself, as soon as her glass works have again begun operation. It is obvious that both countries will themselves try to supply as much as possible of the machinery required."

That Germany cannot resume her export trade until the raw materials have been imported for domestic needs is another probability to which the report gives attention, with a comment that Germany will restrict importations at first to essential articles.

On the other hand, the country is in urgent need of raw materials for the supply of the internal needs of the population. Germany during the first year after the war may be compelled to double her former orders for all those supplies which are indispensable for her industries and the feeding of her population. Taking into consideration the economic situation of Germany of today, the German demand for all these products should be approximately as follows:

	Average before the war.	Estimated demand first year after the war.
Cotton	\$150,000,000	double
Wheat	100,000,000	double
Wool	100,000,000	double
Barley	100,000,000	double
Copper	80,000,000	double or more
Skins and hides.....	75,000,000	double
Iron ore.....	60,000,000	same
Coffee	50,000,000	75,000,000
Coal	50,000,000	less
Nitrate	45,000,000	double
Silk	40,000,000	same
Rubber	40,000,000	double or more
Lard	35,000,000	double
Linseed	25,000,000	double
Oil cake.....	25,000,000	same
Rice	25,000,000	double

With regard to machinery and industrial materials opinion differs. Much machinery has been destroyed either by being overworked during a period of excessive economic pressure or by dismantling so as to extract essential raw materials. Copper has been taken from the locomotives and electrical machinery, which Germany must replace in order to resume industrial progress. Germany is an industrially highly developed country. She can make nearly all machinery used in her industries. Therefore she may be expected to buy

only what is necessary, but she will give machinery preference before any other industrial product, as by the possession of machinery she will be enabled to produce a greater proportion of the industrial goods formerly imported. The yearly bill paid by Germany for imported machinery was approximately \$30,000,000. It is most likely that after the war it will have to be doubled.

The destruction of property in Poland is estimated at \$875,000,000, that in Austria at about \$600,000,000 and in the Balkans \$300,000,000.

The proposed economic alliances among the Allies of both groups of belligerents, the economic grouping of the Scandinavian countries and the Russo-Japanese alliance are discussed.

The report refers to certain predictions that the proposed economic alliances are impractical, but says:

"The present fact is that two European economic alliances have been created, for the war abrogated the most favored nation relation between the powers which are now enemies. If the members of either the proposed Entente or Central economic alliances seek by differential tariff duties to prefer each other and their respective colonies, a discrimination against the products of the United States will automatically be created.

"If special shipping arrangements are carried so far as to artificially group lower rates for Allies than for neutral commerce, the parity of ocean freight charges to and from American ports, as compared with to and from European ports, which has been one cause of toleration of American dependence upon foreign carriers, will be disturbed. Co-operation replacing individual effort may be the general industrial result of the war in Europe. To shorten the period of reconstruction the following policies have been proposed or discussed:

"1. Rebuilding destroyed buildings and factories with governmental aid in money and materials.

"2. Supply of necessary machinery and raw material for industry by government.

"3. Allocation of labor through governmental employment agencies.

"4. Monetary assistance to manufacturers and artisans.

"5. Distribution of seeds, animals and machinery to farmers.

"6. Restriction of imports to necessity, and control of shipping in conformity with such policy.

"To carry out this program governments will have to make reconstruction loans. To secure best results for the money expended, necessary foreign buying of materials will be done on a national co-operative basis. To rectify their foreign exchanges and secure an income for their industries, independent of the home market, European nations have generally announced their intention to further support the foreign trade of these industries by a program including the granting of rebates in buying raw materials, and for transportation, co-operative exporting by groups of manufacturers and special financial assistance to exporters. Steps already taken indicate the following tendencies: "Exclusion of as much as possible of the profit of the foreign exporter.

"Elimination of the necessity of buying raw materials from enemy countries and replacement, where possible, of manual labor by mechanical energy and a larger employment of machinery."

Chattanooga Foundry Working on South American Order.

Chattanooga, Tenn., January 26—[Special.]—The United States Cast Iron Pipe & Foundry Co. here this week cast the first steel pipe especially intended for South American trade which has ever been cast in the United States. This is the beginning of work on a \$3,500,000 drainage pipe order which the United States Cast Iron Pipe & Foundry Co. received from the Argentine Government. Alfred Marino, municipal engineer of Buenos Ayres, was present to see the first metal poured, and an Argentine commission of engineers will inspect the drainage pipes as they are manufactured.

Chattanooga naturally feels very much elated over being thus identified with the export trade, although the corporation's plants in other cities will help fill the order.

It is understood that this order is a part of the Argentine Government's program of internal improvements, which will cost altogether \$70,000,000.

Drainage Operations in Florida as Discussed at Annual Meeting of State Drainage Ass'n

By HOWARD L. CLARK.

West Palm Beach, Fla., January 25.

Drainage of the Everglades and the questions bearing on this project in its vital importance to the State and to the country at large were the chief topics of discussion during the fourth annual meeting of the Florida Drainage Association, held at West Palm Beach January 22 and 23. And right here, for the benefit of skeptics, let it be said that the general consensus of opinion of the engineers and drainage experts who have given years to a practical and scientific study of the vast undeveloped region known as the Everglades, embracing some 15,000,000 of acres, is that the drainage of this enormous area is practicable, and from an engineering standpoint the main problem has been solved, while from the standpoint of productivity of its soils the accompanying illustrations bear witness.

The association convened Monday morning, January 22, with a representative attendance, which was later in the day increased by a number of tardy members, making it the greatest meeting in point of numbers present that the association has ever had during its three years of existence.

In the absence of President Geo. W. Oliver of Bartow, S. B. Jennings of Jacksonville presided. Welcoming addresses were made by Mayor W. A. Dutch of West Palm Beach, L. T. Lockwood, chairman Board of County Commissioners, and J. M. Burguières spoke on behalf of the Products Department of the West Palm Beach Board of Trade. Mr. Burguières stated that all counties from Palm Beach south are vitally interested in drainage, and their future prosperity and progress are bound up in the final drainage and development of the Everglades. In fact, as brought out during the convention, every county in the State has to meet the problem of drainage. He also advocated the need of co-operation and broader organization with a paid secretary to insure united action in all communities in the greater interest of drainage.

After the response to the addresses of welcome by R. N. Wilson, county district demonstrator for West Palm Beach, Benj. Getzoff, secretary and treasurer of the association, read his report of the work accomplished since the previous meeting, in which he said, in part, that the work done in the State during the year is evidence of the fact that reclamation and drainage is at last receiving the attention from the State at large that will ultimately place it in the front as one of the most important factors in the development of Florida.

Certain resolutions adopted at the last meeting were mailed to the legislators of the State and to Representatives and Senators at Washington, a number of whom have signified their intention to aid in the work, and every effort should be exerted to secure the measures proposed in these resolutions, namely, Federal aid, experiment stations and a new soil survey for the Everglades. This report called attention to the fact that information relative to Florida drainage projects has been furnished to bond houses, engineers and contractors, which is only one of the many means by which the Florida Drainage Association can demonstrate its value to its members. It is the duty of every member to make the association useful, if it is to live up to the ideals and hopes of its founders. The association can be of assistance in the organization of drainage districts. Each district should furnish to the secretary a report at certain stated periods of the progress of the work, and this report should be published. Records should be kept of the soils that are found in the various districts of the State, and information relative to crops should be part of the records of the office. The association should be a vital factor in the education of every Floridian to the value of drainage and reclamation.

The surface has only been touched in the work of the past year. It is true, perhaps, that there have been more publications mailed out, but it is not enough. Instead of 2700 pieces of mail in a year, that number should be mailed out each month. Furthermore, every man who is engaged in drainage operations should furnish a story of what he is accomplishing for publication, so that others can profit by what he has overcome.

The future possibilities of drainage in Florida depend entirely upon its people.

The following are the drainage districts incorporated under the law of 1913:

Peach Creek, Davenport and Loughman drainage districts, in Polk county; Lake Worth and Loxahatchee drainage districts, in Palm Beach county; Limestone drainage district, in De Soto county; Halifax and Lake Ashby drainage districts, in Volusia county; Iona drainage district, in Lee county; Davie Farm sub-drainage district, in Dade county, and Homestead drainage district, in Dade and Monroe counties; Pinellas Park and Taft drainage districts, in Orange county; Upper St. Johns and Hastings drainage districts, in

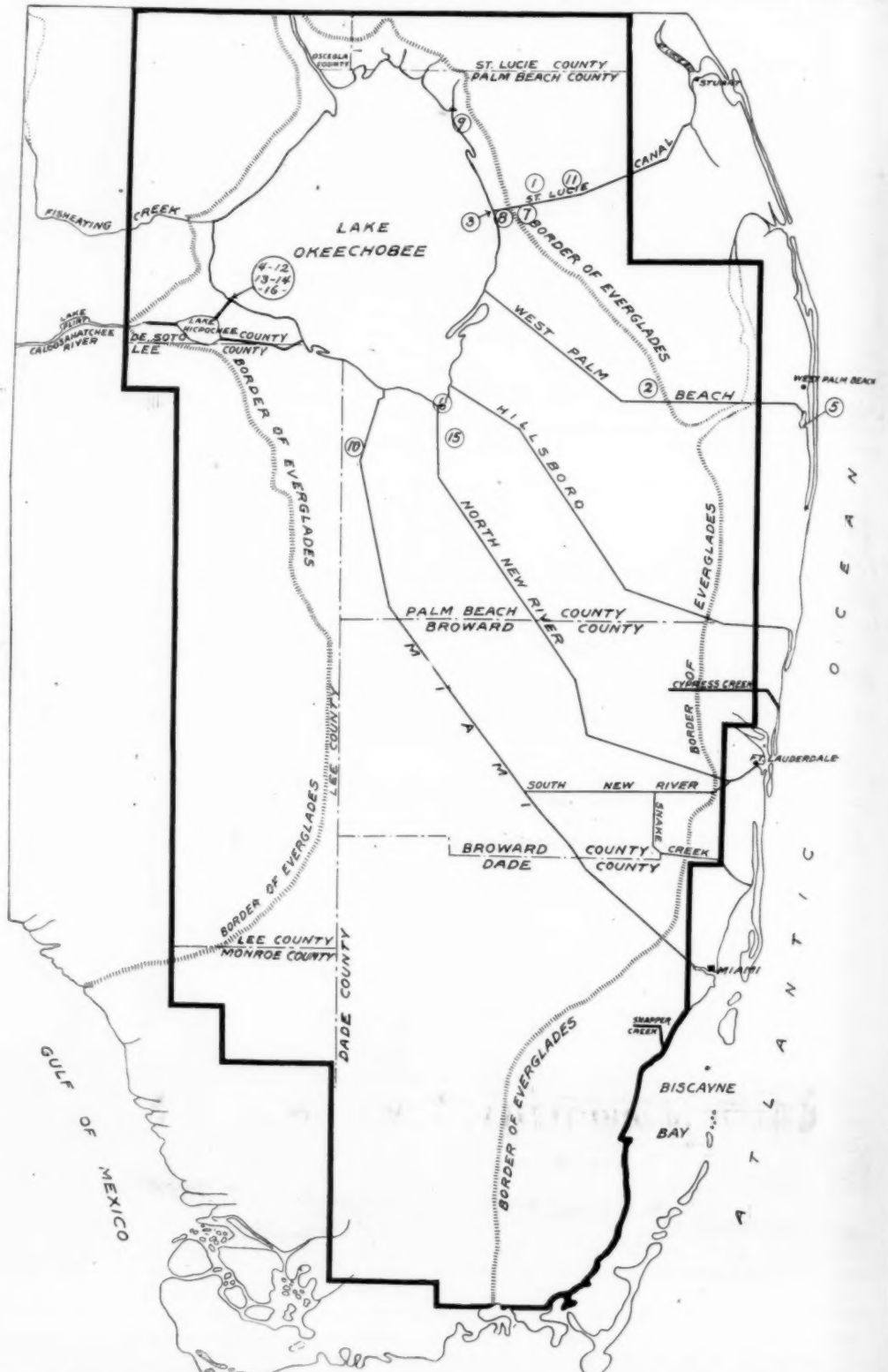
St. Johns county; Lake Largo-Cross drainage district, in Pinellas county, and Baldwin drainage district, in Duval county.

All told, there are 18 drainage districts of which notice has been given to the association.

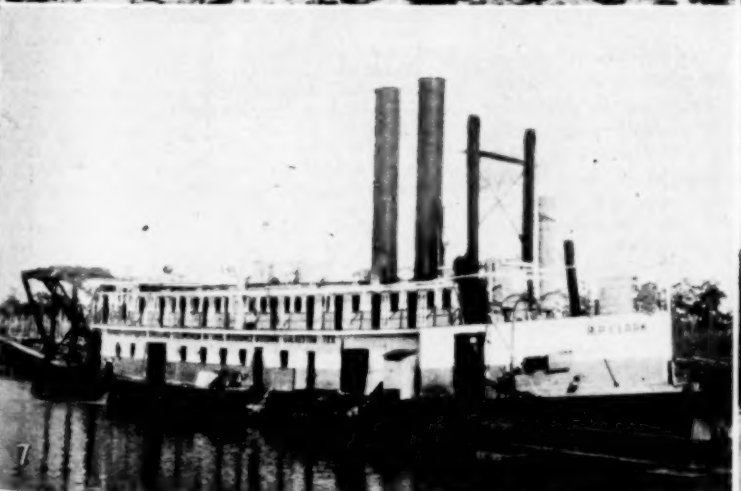
It should be possible for the secretary to have detailed information as to the acreage, benefits, bond issues, officials, etc., of every district. It should be made the object of determined effort to secure this information.

Membership in the association increased to 148 during the past year. It is hoped that the increase during the coming year will be equally as great.

Mr. P. A. Vans Agnew of Jacksonville opened the afternoon session with an address on "Drainage Legislation." He pointed out in a general way the inefficiency of the laws regulating drainage districts in Florida, and besought the members to study the problem of legislation of drainage districts and if possible make some recommendations along this line. He sketched the outline of several valuable resolutions



MAP OF EVERGLADES DRAINAGE DISTRICT OF FLORIDA, SHOWING DRAINAGE DISTRICT LINES, LAKES, OCEAN AND GULF LINES, CANALS, ETC. NUMBERS INDICATE LOCALITIES WHERE PHOTOGRAPHS SHOWN ON FOLLOWING PAGES WERE TAKEN, NUMBERS ON THE MAP CORRESPONDING TO THE NUMBERS ON THE CUTS.



PROGRESS PICTURES SHOWING DEVELOPMENT THROUGH DRAINAGE OF EVERGLADES OF FLORIDA FROM INDIAN VILLAGE AND NATURAL WILD CONDITION. 1. Seminole Indian camp on edge of Everglades. 2. View of edge of Everglades before water was lowered. 3. Dredge "Miami" in St. Lucie Control Canal. 4. Austin tractor crossing shallow creek. 5. Dam at West Palm Beach, showing spillway where water flows into Lake Worth and Atlantic Ocean. 6. Lock on the Fort Lauderdale Canal during construction in November, 1916. 7. Dredge "R. P. Clark" in St. Lucie Control Canal on property of Southern States Land & Timber Co., West Palm Beach, Fla., which owns over 300,000 acres of land in this section. 8. Control Canal one mile from Lake Okeechobee, showing water draining from prairie on property of Southern States Land & Timber Co.

which were later acted upon and adopted by the association.

Following Mr. Vans Agnew's address, Mr. A. C. Stever of the United States Bureau of Animal Industry, Jacksonville, read a paper prepared by Dr. E. M. Nighbert, United States Department of Agriculture, Jacksonville, who was to address the association but was unable to attend. In this paper, entitled "Cattle, a Fundamental Industry in the Reclamation of the State of Florida," Dr. Nighbert clearly showed that cattle raising in Florida is feasible and profitable, and that it is of great value in land development. The following excerpts were quoted from Dr. Nighbert's paper:

"High-class cattle in particular and high-class livestock generally have in the past, and will, in my opinion, continue to be a future paramount factor in safe and permanent agricultural development in the State of Florida. Your association is interested in two main objects in addition to many smaller factors of your work. First, draining low wet lands, making them arable and making arable lands productive. Second, making final disposition of these lands in a way that will invite permanent farm settlers and home builders.

"Cattle have always played their full share in developing large areas of land, and their place has remained permanent, no matter how intensified the farming operations may have been developed, because cattle make use of by-products of the farm in the way of consuming forage and marketing such products in a way that is satisfactory and profitable and at the same time holding the production of the soil to a maximum point.

"There are only two things, broadly speaking, that affect the cattle industry in the State of Florida, namely, the wide spread of a prevalent disease carrier, the cattle tick, and a widespread neglect in the way of care, breeding, feeding and providing for comfort of the stock during the scant grazing of the few winter months.

"In comparing present conditions in Florida to similar conditions of early pioneer days of other sections of our country, for instance, what is known now as the Middle West, which was at one time a great wilderness and on which large numbers of cattle ranged, it is found that Florida cattle have not contributed to the foreign and domestic markets the quality of product demanded by the consuming public, while in the early history of the cattle industry of the Middle West the cattle there met in a large measure the demands of the time.

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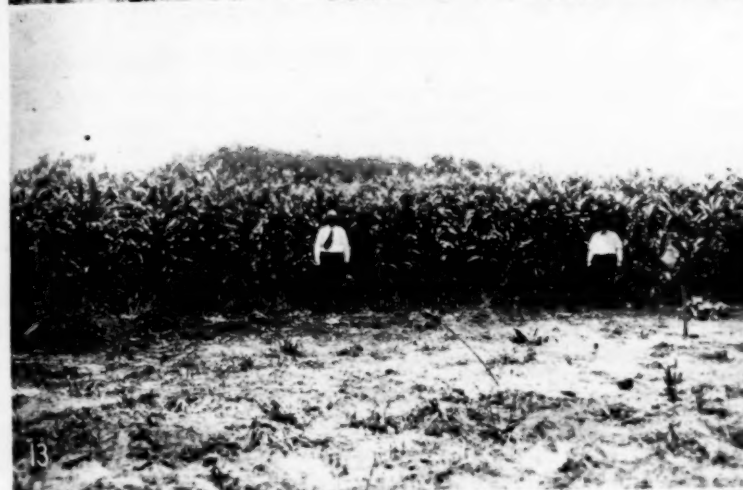
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clamation project of the United States, can be even remotely compared with the work done by the Everglades Drainage Commission and the trustees of the Board of Internal Improvement in economy of expenditure, character of work performed, correctness of design, or results accomplished."

Other addresses were made by H. S. Fairchild, West Palm Beach, chairman of the Lake Worth drainage district, who spoke on drainage laws of Florida, acts of 1913, and F. C. Elliott, chief drainage engineer, State of Florida, who is perhaps in closer touch with the work of that section than anyone else, read a paper on the "Everglades," describing the work under his control and especially pointing out the extremely bad business policy of the State, which is by far the largest landowner in Florida, of selling off its land to pay taxes. Mr. Elliott impressed on the association the physical characteristics of the whole Everglades region. The Everglades is that level plain that stretches from a few miles around Lake Okeechobee southwesterly to the Gulf. It is caused by the overflow of the lake's waters and local rainfall. Being practically a level plain, underlaid with a stratum of limestone formation, which slightly turns up all around similar to a shallow basin with the exception that the southern portion is flattened out and the whole covered with grasses and vegetation, the water is kept from flowing off. The canals are to regulate the water level in the lake and drain off the surplus water in the flat country south of the lake by piercing the rim of rock of the basin. Several locks are built into the canals to keep the water at the proper level, as the drained area, as stated, is considerably above sea level. The larger canals are navigable for small boats, and at one or two points it is intended to establish hydraulic plants to furnish local power. It is stated that the fertile soil of this region, which is from two to 20 and 30 feet deep, will grow abundant and varied crops. In fact, the development of this region will make Florida one of the greatest producing States of the Union.

This ended the addresses and reading of instructive papers. Regular business of the association was resumed by reading committee reports and adoption of resolutions endorsed by the Florida Drainage Association. Among those adopted of special interest to drainage and other development work of the State are:

Application be made for establishment of general law authorizing and empowering board of supervisors of any drainage district to negotiate with the United States for a permit from the War Department approving the plan of reclamation of such drainage district.

Resolution endorsing and supporting the bill introduced by Senator Fletcher January 6, which embraces the power to grant a right of way through public lands of the United States for drainage canals.

Approval of the plan of the State and Federal Government in arousing interest in cattle improvement and tick eradication work.

Passage of an act providing annually for a sum sufficient to pay the annual tax levied by any drainage district upon any lands within such district belonging to the internal improvement fund of the State.

Fix amount of tax collector's bond by leaving the amount of the bond to the judgment of the board of supervisors instead of fixing the amount at twice the estimated amount of taxes in the district.

Another resolution called for assistance from every drainage district in securing money for carrying on association work.

The meeting closed with the election of officers for the ensuing year. They are: President, P. A. Vans Agnew, Jacksonville; vice-presidents, Geo. W. Oliver, Bartow; J. M. Burguières, West Palm Beach; F. C. Elliott, Tallahassee; W. S. Jennings, Jacksonville; Geo. B. Hills, Miami, and secretary and treasurer, Benj. Getzoff, West Palm Beach.

The Dixie Culvert & Metal Co., Atlanta, and the F. C. Austin Drainage & Excavator Co. of Chicago were the only concerns which had exhibits. This is a feature that the association is encouraging and hopes to enlarge at coming meetings.

An interesting feature of this year's meeting was the two-day boat trip through the heart of the Everglades by the delegates as the guests of the association. This trip was by the recently completed Palm Beach Canal through Lake Okeechobee to Moore Haven and return.

Notable Results of Co-operation and Community Organization.

From February 5 to 8 there will be held in Gastonia, N. C., the first convention of North Carolina business men with the secretaries and demonstrators of the State. This combination meeting is for the purpose of bringing the several forces closer together for the further upbuilding of North Carolina. The convention calendar follows: On February 5 and 6 there will be exclusive meetings of the Commercial Secretaries of the State. The Government Farm Demonstrators of Western North Carolina will arrive and establish exhibits of their counties. On February 6 there will be a meeting of the bankers, manufacturers, merchants and other business men at a banquet. The principal speakers will be W. P. G. Harding, governor of the Federal Reserve Board, and Fairfax Harrison, president of the Southern Railway Co. Following these addresses several prominent business men will talk on the subject of a State Chamber of Commerce for North Carolina. On Tuesday afternoon there will be a meeting at the Courthouse, at which Mr. Harding and others will speak.

It is believed that the outcome of this meeting will be the formation of plans for a strong State commercial body.

An example of what may be accomplished by community organizations such as are represented in this convention, and to foster which the convention is held, may be seen in the Greater Gaston County Association, formed in Gastonia four months ago with a membership of something less than 500. There are now in Gaston county seven live commercial bodies working for their respective towns and for the county at large. As a result of this county organization the county towns have been brought closer together. Community meetings have been held in the various towns and schoolhouses, and it is said to be little short of wonderful the way the people have taken on new life since this organization was started. Some of the towns have begun to pave their streets, put in sewerage systems, build city halls, put in water-works, clean up farms, etc.

Charleston's Chamber of Commerce 132 Years Old.

In its one hundred and thirty-second anniversary report the Charleston (S. C.) Chamber of Commerce shows a growth for the year from 369 members to 1000 and an income of revenues from \$9133 to \$25,000.

These gains, however, are reported to be overshadowed by the increase in co-operative spirit of its membership.

Organized in 1774 and incorporated in 1784, this Chamber of Commerce stands as one of the country's earliest trade organizations, with a notable record of service to the city and State. Commodore Gillon, commander of South Carolina's little navy, was the first president. Among other letters of interest on file is one from Thomas Jefferson inquiring into the commerce and production of South Carolina and Georgia.

Charleston harbor today holds its place of importance in no small degree because of the Chamber's activities.

Proposed Erection of Large Carbon Plant.

In connection with the development of an extensive gas field near Monroe, La., the intended erection of a large carbon plant is announced. The Columbia Carbon Co., it is said, will erect a plant at Spyker for the manufacture from natural gas of carbon and its products. At a cost of \$200,000 a plant is to be erected that will have an initial gas consumption of 2,000,000 feet daily, to be supplied by the Progressive Oil & Gas Co. from its No. 2 well.

Further report has it that a large oil refining company is watching the development of this field, and in the event of the discovery of no oil may build a plant for reducing gas to a very light grade of gasoline.

Exporting Agricultural Implements Through Savannah.

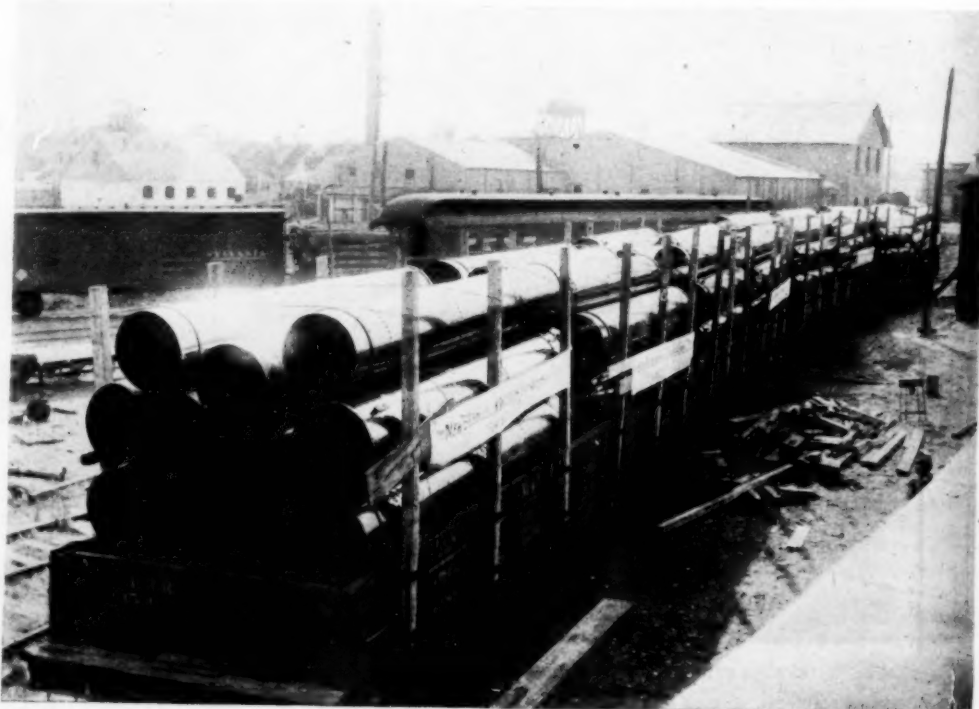
The International Harvester Co. is loading at Savannah the second steamer which it has recently had at that port with agricultural implements for shipment to Russia.

Like many of the great exporting companies of the West, the International Harvester Co. is beginning to recognize and to utilize the splendid shipping facilities of Southern ports.

Asheville Plans Extensive Paving Work.

In a letter to the MANUFACTURERS RECORD B. M. Lee, city engineer of Asheville, N. C., advises that the city is contemplating extensive street-paving work during the present year. This will involve about 30,000 square yards of concrete paving, 25,000 square yards asphalt concrete (Topeka specification) and about 9000 square yards of sheet asphalt or brick.

PIPE SHIPMENT TO NEW JERSEY FROM NORTH CAROLINA.



Four carloads of riveted pipe as shown in the accompanying illustration was recently shipped from the New Bern (N. C.) Iron Works & Supply Co., Inc., to the Atlantic, Gulf & Pacific Co., Elizabethport, N. J., each car containing twenty-eight sections of pipe 27 inches diameter, weighing 1100 pounds each, making one shipment of over 61 tons of riveted pipe. Last year the manufacturer sold over 15,000 feet of such pipe in sizes from 20 to 27 inches diameter to this one customer.

The Iron, Steel and Metal Trades

STEEL MILLS HAVING DIFFICULTY IN MAINTAINING PRODUCTION.

Buyers of Iron and Steel Become Conservative as War's End Approaches—Pig-Iron Market Less Active.

New York, January 29—[Special.]—The consensus of opinion among iron and steel circles last week was that the end of the European war would come some time in the second half of this year. The large steel producers do not believe that the war can be prolonged much longer, on account of economic and social conditions in the countries of both great groups of the fighting powers. There seems to be a disposition to consider, however, that if the war should last over the present year there are possibilities of the edge coming off the steel demand before the end of 1917. Such possibilities accentuate the desirability of making calculations based upon new steel conditions developing at some time during the second half of this year, so that whether the war ends or not in that period there is an evident possibility of new developments occurring within that time.

While all buyers of iron and steel now follow a conservative policy in making commitments for all deliveries, except the next few months, there is nevertheless a fairly large aggregate of business being placed, almost, if not quite, equal to current shipments in the case of many products. As to the steel trade itself, it is much more concerned about the immediate future than conditions when the European war is over, being deeply involved in the matter of maintaining production and shipments on the one hand, and securing material on the other. The cold weather last week seriously interfered with the production of steel and shipments of all kinds of commodities in the Pittsburgh and valley districts. The Carnegie Steel Co. banked 10 furnaces on account of deferred shipments of coke, and additional furnaces will be treated likewise unless relief is obtained immediately.

While some interest is being manifested in the question as to whether the independent steel mills will follow the United States Steel Corporation in its advance of \$3 a ton for plates and shapes, the interest is largely academic, since the market for forward deliveries of these products has been nominal for some time past. Buyers are not interested in "delivery at mill convenience," and that is about all that can be obtained at base prices. The new Carnegie prices are: Bars, 3 cents; shapes, 3.25 cents, and plates, 3.75 cents.

The demand for ship plates for any delivery up to the end of 1918 was the main feature of the steel market last week. Leading plate manufacturers are so fully engaged that they are unable to accept any further orders for delivery in a reasonable length of time. Some foreign buyers commenced negotiations for plates to be delivered in the last quarter of 1918, while domestic shipyards sought fully 75,000 tons for early 1918 delivery.

Merchant car builders are experiencing great difficulty in arranging for steel against new orders. Numerous foreign contracts are being held up until the mills can arrange to give the builders protection on the steel required. The Standard Oil Co. ordered 50 gondolas from the Standard Steel Car Co. last week. The French Government ordered 5000 small cars, which are to be shipped in parts and erected abroad, the German war prisoners to be used in the work. Other orders last week included 10 express cars by the Delaware, Lackawanna & Western Railroad from the Pullman Palace Car Co., two postal cars by the Pere Marquette Railroad from the American Car & Foundry Co., while the Boston Elevated ordered 35 subway cars from the Pressed Steel Car Co.

There is now scarcely any tinplate obtainable for this half-year's delivery. What little tinplate business is being done is confined chiefly to additional contracts between those who made regular contracts and where the buyer finds that he required additional material. Thus there is no regular established market, as transactions are under special conditions.

The scarcity of all descriptions of sheets in the open market continues pronounced, and is probably greater

than a week ago. In black sheets there have been recent sales at 5 cents covering quite a considerable tonnage, all for early shipments. The minimum of the market continues to be quoted at 4.50 cents, but such a quotation is not being generally made. It is to be noted that mills having sheet-metal departments are making their sales of such sheet-metal products on the basis of fully as high prices for the plain sheets as they charge in the open market. They are not cutting the flat sheet market when selling the finished product, and indeed have been making sales of late based on as high as 5 cents for black sheets.

Domestic consumers of foundry pig-iron are satisfied with placing very small orders at the moment and it is evident that a less strong tone prevails in nearly all sections of the country, with freer offerings by both Northern and Southern furnaces for shipment over the second quarter and second half of 1916. There was scarcely enough business last week to indicate the temper of sellers, but the indication was that buyers might obtain slight concessions from previous asking prices, although there was no pressure to sell.

Inability to obtain pig-iron shipped by furnaces some time ago has resulted in melters in the Central West paying premium prices for small spot lots. Premiums of \$2 a ton have already been given, and Western advices indicate that unless there is an early improvement in railroad conditions the premium for spot iron will increase still further.

Foreign demand for pig-iron was active last week, but the high ocean freight rates acted to restrict bookings. A Canadian plant closed late in the week for 2000 tons standard low phosphorus for last half delivery. There are inquiries for 5000 tons low phosphorus iron from Canada still in the market. French buyers are seeking 50,000 tons standard Bessemer. Export demand for foundry grades is less pressing.

The upward movement of prices for ferro-manganese and spiegeleisen has not yet abated. Sales of 20 per cent. spiegeleisen for second quarter delivery was made on Friday of last week at \$60 furnace, while on export business sellers are asking \$63.50 Eastern furnace or \$65 tidewater.

(Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$60.00—\$65.00
Open-hearth billets (nominal).....	60.00—65.00
Open-hearth sheet bars.....	60.00—65.00
Bessemer sheet bars (nominal).....	60.00—65.00
Forging billets.....	80.00—85.00
Wire rods.....	75.00—80.00
Tank plates.....	3.60—5.00
Steel bars.....	3.60—5.00
Refined iron bars.....	3.25—
Rails.....	50.00—51.00
Steel hoops.....	3.50—
Cold-rolled strip steel.....	6.50—7.00
Sheets, No. 28 gauge.....	4.50—5.00
Galvanized sheets.....	6.50—7.00
Wire nails.....	3.00—
Cut nails.....	3.00—
Plain fence wire, base.....	2.95—
Barb wire, galvanized.....	3.85—
Railroad spikes.....	3.40—

Pig-Iron.

Bessemer, Pittsburgh.....	\$35.95—
No. 2 foundry.....	30.95—\$32.95
Basic, valley.....	30.95—31.95
Gray forge.....	29.95—30.95
Basic, Philadelphia.....	30.00—
No. 2 foundry, Northern.....	31.75—32.25
Low phosphorus.....	55.00—57.00
No. 2 foundry, Buffalo.....	35.00—
No. 2 South, Cincinnati.....	28.90—27.90
Northern foundry, No. 2 Cleveland.....	30.95—31.95

Scrap-Iron and Steel.

Heavy melting steel.....	\$22.00—\$23.00
Old steel rails, re-rolling.....	27.00—28.00
Old iron car wheels.....	19.50—20.00
Old steel car wheels.....	26.00—27.00
Steel car axles.....	42.00—43.00
Iron car axles.....	42.00—43.00
Low phosphorus.....	31.00—32.00
No. 1 cast scrap.....	19.50—20.00
Heavy cast scrap.....	18.00—18.50
No. 1 railroad wrought.....	22.00—23.00
Cast borings.....	12.00—12.50
Machine shop turnings.....	12.25—12.50
Railroad malleable.....	19.50—20.00
Stove plate.....	11.00—11.00

Optimistic Views Expressed on Market Conditions in Birmingham District.

Birmingham, Ala., January 29—[Special.]—While aggregate business with the pig-iron manufacturers during the past week was not so voluminous as it has been at times in this section, there is evidence of need of iron, consumers pleading for delivery on orders placed

some time ago. Furnace companies announce that there have been several sales in car lots with immediate delivery practically promised. Railroad officials are promising a better supply of cars from now on. At various iron company offices it was noted in the last few days that orders issued by the Interstate Commerce Commission on the car situation were having effect, and many cars will be sent to this section at once from roads which are using the cars now. Inquiries for iron are quite numerous, the Alabama Company receiving two cables recently inquiring for one lot amounting to 5000 tons and another for 6000 tons. The business could not be handled. Other export business has been offered in this district. Sales of basic iron, though not in great tonnage, were made in the last few days at \$1 per ton advance, or on a basis of \$25 per ton. The regular quotations are around \$24 per ton, No. 2 foundry, though the Steel Corporation is said to be quoting \$23 per ton with but little, if any, iron to be offered.

Attention is being paid to production, and records on make for the first month of the year in the Southern territory will be most satisfactory. Inclement weather affected some of the operations in the open in this district recently, but transportation companies looked after the intra-district traffic very carefully and kept supplies at furnaces well up to needs.

The coke supplies, with manufacturers looking on the inducements in the open market with much envy, are still a little narrow and furnace operations are carefully watched, though so far the needs have, by ardent and constant attention, been protected.

J. W. Porter of the Alabama Company, J. W. McQueen of the Sloss-Sheffield Steel & Iron Co. and others in charge of the selling of iron, asked as to market conditions the past week, replied in most optimistic vein: With some of the furnace companies here it is a matter of make and delivery. With others there is an anxiety to take up some of the offers that are made for early delivery of iron. The inquiries for export, in addition to being numerous, appear to be very solicitous for acceptance.

W. H. Stockham, president of the Stockham Pipe & Fitting Co., announces this week the purchase of a site in Birmingham on which will be erected a large small pipe and fittings plant, the works to be modern in every detail. An expenditure of more than \$200,000 is involved in the deal. This company has a good market for the pipe and fittings produced, and Mr. Stockham feels confident of the future. Work will be started early in the summer, and it is expected to have the plant finished by January 1 next.

Considerable steel is leaving the Birmingham district on foreign orders, Japan shipments being especially noted lately.

Quotations are given as follows:

PIG-IRON.

No. 1 foundry and soft.....	\$24.00 to \$24.50
No. 2 foundry and soft.....	23.50 to 24.00
No. 3 foundry.....	23.00 to 23.50
No. 4 foundry.....	22.50 to 23.00
Gray forge.....	21.75 to 22.25
Basic.....	24.00 to 24.50
Charcoal.....	23.00 to 27.00

OLD MATERIAL.

Old steel axles.....	\$35.00 to \$36.00
Old steel rails.....	30.00 to 31.00
No. 1 wrought.....	21.00 to 21.50
Heavy melting steel.....	19.00 to 20.00
No. 1 machinery.....	18.00 to 18.50
Car wheels.....	17.50 to 18.00
Tramcar wheels.....	16.00 to 16.50
Stove plate.....	12.00 to 13.00
Shop turnings.....	10.00 to 10.50

METAL MARKETS GAIN IN STRENGTH.

Little Demand for Copper, But Prices Are Maintained—Spelter Becomes Active and Higher—Lead and Tin Firm.

New York, January 29—[Special.]—An improved situation was noted in all of the metal markets last week, and a good brisk demand was manifested from buyers for copper, spelter, tin and lead. Just what reason can be credited for the increasing strength of the metal markets is not exactly known, although the prospects for a continuation of the European war for at least a year had probably something to do with it.

The copper market continued in the same extraordinary condition as was noted in these columns last week, as both buyers and sellers refused to bid for or to offer

to sell the metal for early deliveries. Some dealers, however, asserted that buyers were quite anxious to obtain metal, but that the supply available for nearby delivery was very small, a good business having been done on the upward movement. Dealings in copper for second quarter delivery are expected to show some startling turns over the next few weeks, when interests who sold short are expected to try and cover their requirements. With this condition in prospect it would not be surprising to witness some bear pressure on the market in an effort to force prices down.

For the first time in the history of the red metal, at least since refining by electrolysis has made present-day conditions, there was not a single pound of unsold copper brought forward from last year into 1917. This statement covers not only the metal actually refined and ready for shipment but every pound at different stages of treatment, in every refinery in the United States.

An improved demand for tin was noted in the end of the week, although sellers were not at all anxious to offer metal freely. While spot prices may be regarded as too high, the general outlook is not favorable for

lower prices on tin. Arrivals of tin to date total 4200 tons, while stocks afloat are 3033 tons.

The improved sentiment in the spelter market, coupled with the prospects of the war in Europe being prolonged, favorably affected the spelter market last week. Sellers were somewhat shy, while the presence of buyers in the market served to advance prices. Railroad conditions also exerted an influence toward higher quotations. Sellers have very little nearby metal to offer for delivery here, while it appears that they are refraining from quoting on St. Louis shipments.

Sales of lead for early February shipment from St. Louis were made at 8 cents on Friday, but holders of the metal for this delivery were not over-anxious to part with their holdings at that price. The upward movement is credited entirely to railroad conditions. It is stated that practically all buyers have covered their requirements, but non-arrival of shipments had compelled them to enter the market for additional tonnage. Shipments of lead which left St. Louis in December are still to arrive here. Buyers were seeking spot lead last week, but there was none to be had.

	Copper.		Lead.		Spelter.	Tin.
	Lake.	Electrolytic.	A. S. & R. Co.	Independent.		
Monday, January 22.....	31.00-31.50	31.50-32.50	7.50	7.75	9.92½-10.00	45.50
Tuesday, January 23.....	29.00-30.00	30.00-31.00	7.50	7.75	9.92½-10.00	45.50
Wednesday, January 24.....	29.00-30.00	30.00-31.00	7.50	7.75	9.92½-10.00	45.50
Thursday, January 25.....	29.00-30.00	30.00-31.00	7.50	7.75	9.92½-10.00	45.50
Friday, January 26.....	31.75-32.25	32.50-33.00	7.50	8.00-8.25	10.55-10.80	45.12½

TO DRAIN 300,000 ACRES.

Keystone Drainage District Files Plans for Big Reclamation Enterprise in Arkansas.

Plans and specifications for the Keystone Drainage District of Arkansas have been filed, and the commissioners will at once proceed to arrange for the necessary construction to drain 300,000 acres of land in Mississippi, Craighead and Poinsett counties. The total estimated cost of the improvement is \$3,000,000, and the engineer is the Morgan Engineering Co. of Memphis, Tenn. The district commissioners are A. C. Lange and C. E. Crigger of Blytheville, Ark., and T. G. Statton of Marked Tree, Ark. It is claimed that this will be the second largest drainage district in the entire country and an enormous area of fertile land will be made available for cultivation. This land is largely located between the Right Hand Chute and Little River and St. Francis River, another portion being east of Big Lake. The district is located in the extreme northeast corner of Arkansas, being immediately south of the Little River Drainage District of Missouri, said to be the largest in the United States.

There will be more than 300 miles of canals and 54 miles of levees constructed for the Keystone Drainage District, requiring the removal of 30,000,000 cubic yards of earth. The Right Hand Chute and Little River will be utilized as far as possible and the main canal will be five miles long, with a depth of 18 feet, 280 feet wide at the base and 340 feet at the bank level. A three-barrel reinforced concrete culvert will be constructed under the main floodway in order to drain the land lower than the principal ditches, this culvert making it possible to avoid the cost of pumping water up into the ditches.

Twenty surveyors have been working for more than six months gathering the data upon which the final plans have been based, and all plans and reports were completed in 14 months, notwithstanding that surveying parties were delayed more than five months by floods in the territory to be reclaimed.

The court will soon give consideration to making the assessments in anticipation of issuing bonds for the \$3,000,000 which this great improvement will necessitate.

Probably three years will be required to entirely complete the system, but an effort will be made to complete it within two and a half years from the beginning of construction by dividing the work into several different contracts. Floating dipper dredges, suction dredges, grab-bucket dredges and drag-line excavators, thirty or more in all, will be used.

Notification has been given that the United States Government will advertise on March 1 for bids on \$55,000 annex to the Chattanooga postoffice. Construction work is to be started about April 1.

Southern Industrial Activities.

During the month of January the Construction Department of the MANUFACTURERS RECORD published 3920 items relating to industrial, financial, railroad and building operations, and general business interests of the South and Southwest.

Under the usual appropriate headings, these items are summarized and detailed in the following table:

Industrial and Developmental.	
Bridges, Culverts, Viaducts.....	35
Canning and Packing Plants.....	26
Clayworking Plants.....	17
Coal Mines and Coke Ovens.....	79
Concrete and Cement Plants.....	9
Cotton Compresses and Gins.....	13
Cottonseed-Oil Mills.....	3
Drainage Systems.....	21
Electric Plants.....	71
Fertilizer Factories.....	2
Flour, Feed and Meal Mills.....	31
Foundry and Machine Plants.....	31
Gas and Oil Enterprises.....	102
Hydro-Electric Plants.....	6
Ice and Cold-storage Plants.....	39
Iron and Steel Plants.....	3
Irrigation Systems.....	3
Land Developments.....	33
Lumber Manufacturing.....	89
Metal-working Plants.....	7
Mining.....	61
Miscellaneous Construction.....	27
Miscellaneous Enterprises.....	92
Miscellaneous Factories.....	167
Motor Cars, Garages, Tires, Etc.....	118
Railway Shops, Terminals, Roundhouses, Etc.....	3
Road and Street Work.....	157
Sewer Construction.....	14
Telephone Systems.....	48
Textile Mills.....	65
Water-works.....	38
Woodworking Plants.....	
Buildings.	
Apartment-houses.....	78
Association and Fraternal.....	30
Bank and Office.....	74
Churches.....	109
City and County.....	43
Courthouses.....	14
Dwellings.....	322
Government and State.....	27
Hospitals, Sanitariums, Etc.....	39
Hotels.....	48
Miscellaneous.....	32
Railway Stations, Sheds, Etc.....	25
Schools.....	147
Stores.....	210
Theaters.....	25
Warehouses.....	29
Railroad Construction.	
Railways.....	75
Street Railways.....	6
Financial.	
Corporations.....	115
New Securities.....	362
Fire Damage, Etc.....	3241
Machinery, Proposals and Supplies Wanted.....	199
Total.....	3920

Brick-Kilns, Engines, Etc., for India.

GAJANAN NARAYAN, Gergaum Back Road, Badamwade New Building, Bombay, India.

I appreciate the suggestion to have my inquiries in regard to oil engines and pumps inserted in the MANUFACTURERS RECORD, and shall be pleased to have you do so. I take this opportunity of asking for addresses of manufacturers of kilns and for particular information in regard to American brick-burning process.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

PLANS TO SPEND MANY MILLIONS.

Pennsylvania Railroad Expresses Desire to Begin Work on Baltimore Terminal Improvements.

After a lapse of three and a half years the Pennsylvania Railroad Co. has again presented its plans for the improvement of terminals in Baltimore to the city authorities. The estimated cost of the work is between \$12,000,000 and \$15,000,000. Notwithstanding that the municipality and the railroad company split upon the proposition that the Calvert Station yards should be electrified and all movements therein be made by the use of electric motive power, which difference of opinion has held the two parties to the proposed agreement apart so long, there is no particular change in the plans presented at this time, excepting that the company seems to have definitely decided that building two more tunnel tracks through the city parallel to its present tunnels is the best way to solve the problem of taking care of its increased freight and passenger traffic. Apparently, the idea of constructing a tunnel under the Patapsco River just outside of the entrance to the main harbor has been abandoned, at least for the present, and the construction of a cut-off around the city has also been set aside.

The tunnel proposition now submitted provides for the construction of two one-track tunnels parallel with the double-track main tunnel east of Union Station, and also for the construction of twin tunnels parallel with the double-track tunnel west of Union Station, the twin tunnels to be under Laurens street, one block to the north of Wilson street, under which the present tunnel is located. This would make altogether nearly 2½ miles of new tunnels to be built. The fulfillment of these tunnel plans would provide the railroad with four through tracks all the way across the city, which would relieve present congestion and enable the traffic to be much expeditiously handled.

At Calvert Station the plans provide for a complete transformation of present arrangements. The railroad company has purchased all the properties on the east side of Calvert street for a distance of one block south and two blocks north of the existing station, which is located at the corner of Calvert and Franklin streets, and it proposes to erect at the corner of Calvert and Bath streets, one block south of this station, a new passenger and freight station, which, with the adjacent yards, etc., will occupy the entire site from Bath to Madison streets, four blocks. The railroad already occupies the property immediately to the east of the Calvert street properties which it has acquired, so that they will be combined with and enlarge its holdings. To build this new terminal several streets will have to be closed, but an overhead bridge would be built at Madison street to carry the street traffic over the railroad tracks, which are now crossed at grade by ordinary vehicles. Center street and Monument street, which now cross the tracks entering Calvert Station at grade, would be completely closed, and Read street, one block north of Madison street, which now terminates at Guilford avenue, that is occupied by railroad tracks, would be closed between the avenue and the alley immediately east of Calvert street. The effect of this would be to concentrate all east and west street traffic in that vicinity upon the bridge at Madison street. Franklin street, from Calvert street to Guilford avenue, would also be closed.

Four tracks, instead of two tracks, for the main line entrance to the Calvert Station terminals are also provided for, and this would require the construction under Preston street of a much larger stone arch than the one now there, and it would expand the approach to the yards from that point to Madison street, five blocks.

The station to be built at Calvert and Bath streets to take the place of the passenger station at Franklin street, which was built in 1856, will be designed for freight service on the street level, but the passenger trains will arrive and depart on a grade about the height of the second floor of adjacent buildings. There will be a wall along the entire property on the Calvert

street side. The present freight sheds will be enlarged and new warehouses will be erected. The passenger service there will be only for local and suburban trains which now use this terminal.

In connection with the construction of the new tunnels on the main line in this city it is planned to eliminate three blocks of the tunnel east of Union Station, so that it will terminate at Ensor street instead of at Greenmount avenue. Thus the four tracks which the road will then have, instead of two, will be in an open cut which will take the place of the bed of Hoffman street for that distance. East of Ensor street the present tunnel will be paralleled by the two single-track tunnels to Bond street, where the tunnel ends. A new local station at Gay street is contemplated in place of the present station at Biddle street. West of Union Station, in addition to building a new double-tracked tunnel under Laurens street, the company will eliminate grade crossings, wherever such exist, from the city to Loudon Park. The new local station built at Edmondson avenue takes the place of the old wooden station at Lafayette avenue. The fulfillment of all this work will necessitate many track changes in the yards and on the line.

The necessary ordinances were introduced in the City Council by President John Hubert of the Second Branch, who presented them "by request," they having been submitted by Gamble Latrobe, general superintendent; G. R. Sinnickson, superintendent, and J. C. Auten, principal assistant engineer, for the railroad company.

Long discussion over the ordinances and the plans they provide for is expected. The question of electrification of terminals and of the main line through the city is deemed of primary importance by many prominent and influential citizens, who believe that with increased traffic the smoke nuisance will be unbearable.

Electric Railway and Seaside Resort.

The Ocean City & Fenwick Island Railway Co. has been organized at Ocean City, Md., to build an electric railway eight miles up the beach to Fenwick Island. The construction contract has been let to Thos. E. O'Connell of Phoenixville, Pa., who is also the chief engineer. The line will be constructed parallel with the ocean front, but one block back from it. The company is in the market for about 10 miles of relaying rails weighing from 50 to 60 pounds per yard; also for necessary materials for overhead work, and four trolley cars of the open type, with running boards.

It is proposed to develop a new tract of land fronting on the ocean two miles north of Ocean City, where the beach is especially fine, and it is expected that a hotel will be built, as well as cottages, etc. Construction of the electric railway will begin immediately.

The incorporators are W. B. S. Powell, president; C. Edward Shute, secretary; B. Frank Wagamon and Henry T. Moore, all of Ocean City, and Sherman E. Ayars, 308 Perry Building, Philadelphia. Harry J. Cropper is vice-president, and Frank W. Truitt, treasurer, both of Ocean City; they are also directors.

Interesting Map of the Southern Railway.

A new topographical map of the Southern Railway system from Washington to Atlanta and to the northern boundary of Florida is being distributed by the company. It covers Virginia, North Carolina, South Carolina and Georgia, and also the eastern part of Tennessee. It was designed principally to show the main line from Washington to Atlanta along the eastern slope of the Blue Ridge, which is being developed into a great double-track highway connecting the South with the North and East. The map is beautifully colored, and is geographically accurate. Arrangements are being made by the passenger department of the Southern Railway to generally distribute copies of it to all who are interested in the South.

Commercial Development Train Begins Long Tour.

A. W. Thompson, vice-president in charge of traffic of the Baltimore & Ohio Railroad, accompanied by W. H. Manss, who has charge of the commercial develop-

ment department of the system, and other officers, including Archibald Fries, freight traffic manager; W. H. Galloway, general passenger agent; H. R. Lewis, general freight agent; G. C. Smith, chief of industrial bureau; A. C. Clark, chief of facilities bureau; W. W. Blakeley, interchange commodity agent; H. O. Hartzell, industrial agent, and J. H. Baumgartner, publicity representative, have begun a tour in a special train over the whole system for the purpose of getting in touch with business men all along its lines for the development of business. West Virginia will be the first State visited, and arrangements have been made with the boards of trade at the various towns and cities for meetings and conferences. A motion-picture machine for displaying views of railroad, industrial and commercial activity is one of the features of the train's equipment. About three months will be required to carry out the entire plan.

New Equipment.

Southern Pacific Railway will build 2000 box cars, 250 stock cars and 500 flat cars in its own shops.

Virginian Railway has ordered 1000 hopper cars from the Pressed Steel Car Co.

St. Louis-San Francisco Railroad is reported to have ordered 100 box cars from the Standard Steel Car Co.

Western Maryland Railway has applied to the Maryland Public Service Commission to approve its plans for spending nearly \$4,500,000 for new equipment, including 2000 steel hopper cars, 15 passenger cars, 6 express cars, 2 passenger and baggage cars and 2 cafe cars from the Pullman Company, Chicago, for which contracts were recently closed, as previously published, and for 10 Mallet compound locomotives from the Lima Locomotive Corporation, Lima, O. These purchases are financed by the recent \$6,000,000 note issue.

Southern Public Utilities Co. has ordered 50 all-steel semi-convertible cars from the Southern Car Co., High Point, N. C., for the Charlotte (N. C.) street railways.

Chicago, Burlington & Quincy Railroad is reported in the market for 15 baggage cars, each 70 feet long.

Pennsylvania Railroad will build at its Altoona shops 92 all-steel passenger cars, 2100 freight cars and 225 locomotives for its lines East.

Southern Railroads Gaining Fast.

The Bureau of Railway Economics, Washington, D. C., in its bulletin reviewing operating results for October, 1916, says that on the lines in the South operating revenues per mile exceeded those of October, 1915, by 13.8 per cent., but operating expenses increased only 7.6 per cent., while net operating revenue made the gratifying gain of 26.1 per cent. These percentages of gain were greater than those of either the Eastern or Western lines. For the four months since July 1, including October, operating income increased 24 per cent.

Virginian Railway Increases Stock.

The stockholders of the Virginian Railway Co. have voted to increase the common stock \$4,000,000, making the total \$40,000,000, and to increase the 5 per cent. cumulative preferred stock \$6,000,000, making its total \$35,000,000, or a total of \$75,000,000 altogether. The preferred stock may be withdrawn at any time after three years with settlement at \$105 per share. The additional stock issues will provide for the improvements and new equipment already ordered.

Memphis Described by a Railroad Publication.

The January number of the Agents' Bulletin of the Missouri Pacific-Iron Mountain Railway system reflects marked credit on its publishers. It is devoted to a most interesting description and illustration of the city of Memphis, the chief article being entitled "Memphis—Busy and Beautiful," by C. P. J. Mooney, editor of the Commercial-Appeal. The pictures, of which there are many, show not only the business section, but the suburban residence sections and the parks. Commenting upon civic development, the Agents' Bulletin editorially says: "The time has now come when cities must do more than provide work if they are to attract many

new citizens. Parks, boulevards, playgrounds, swimming pools, etc., are not luxuries; they have come to be real necessities in the modern city if that city is to retain its leadership in an industrial way, for such a city will attract the best class of workmen for its industries."

Atlanta-Anderson Interurban Progress.

Active work is proceeding on the survey for the Atlanta & Anderson Interurban Electric Railway, which is to be built between the capital of Georgia and Anderson, S. C., about 140 miles, and J. L. Murphy, promoter of the enterprise, at the head of which is Henry M. Atkinson of Atlanta, is quoted in a report from Anderson, near which city the engineers are now running their lines, as saying that it is hoped to start grading in a very short time. W. A. Hammel is chief engineer.

It seems to be assured that this proposed road will make a direct connection in Anderson with the Piedmont & Northern Interurban Railway, which is operating as far north as Spartanburg, S. C., 75 miles from Anderson, and which is expected to build a through connection from there to Gastonia, N. C., about 50 miles, to connect the northern part of its system with the southern part. This plan, when completed, will afford means of electric railway travel all the way from Charlotte, N. C., to Atlanta, about 290 miles.

Wonderful Safety of Railroad Travel.

Illustrative of the greatly increased safety of travel by rail as a result of increased vigilance on the part of railroad officers and employees and the adoption of stronger cars, improved signals, etc., is the fact that the Pennsylvania Railroad system carried during the last three years more than half a billion of passengers (the exact number was 553,890,963), or over five times the population of the United States, without loss of life to one of them. On the Pennsylvania Railroad east of Pittsburgh there has been a perfect record of safety for four years, during which the total number of passengers carried was 616,626,957. To bring all this about the company has energetically conducted a campaign for safety. It has built only steel passenger cars, and trainmen have been instructed and educated for both efficiency and safety, and more than 120,000 textbooks on safety have been distributed to the employees.

New Orleans & Northeastern Traffic Growing.

Steps have been taken by the Southern Railway to increase the traffic capacity of the New Orleans & Northeastern Railroad since it has been taken into the system to enable it to handle all business offered by industries on its lines and by connections. It is announced by Horace Baker, general manager of the "Lines West" of the Southern Railway system, that six consolidation 100-ton freight locomotives and 230 cars have been sent to the road for use between Meridian, and Picayune, Miss., the cars being sent from various lines of the system and the engines from the Cincinnati, New Orleans & Texas Pacific Railway. This heavier motive power and the increase in the supply of rolling stock will place the recently acquired railroad in position to do its share in handling the traffic of the system.

Bryan Snyder Appointed Receiver.

Bryan Snyder has been appointed receiver of the Marshall & East Texas Railway, of which he is vice-president and general manager. The receivership was granted by the United States District Court at Tyler, Tex., on petition of the St. Louis Trust Co., trustee for the bonds, which amount to \$1,180,000. A. T. Perkins of St. Louis is president of the line, which is 90 miles long from Elysian Fields to Winnsboro, Tex., and its general offices are at Marshall, Tex.

The Bonsack (Va.) Woolen Mill will add three 330-spindle mules, 16 looms, 3 sets of cards and finishing equipment. This machinery has been ordered, and will provide the company with a four-set mill producing plaid blankets.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Goldsboro, N. C.—Wayne county voted \$90,000 bonds to construct roads.

Jamestown, Ky.—Russell county voted \$50,000 bonds to construct roads during 1917.

Mayo, Fla.—Lafayette county voted \$250,000 bonds to construct roads, etc.

Tarpon Springs, Fla.—City voted \$7500 bonds to improve streets and parkways.

Bonds to Be Voted.

Amarillo, Tex.—City votes February 15 on \$50,000 bonds for street paving.

Brandon, Miss.—Rankin county will vote on bonds to construct 35 miles of highway.

Buckhannon, W. Va.—Upshur county votes February 23 on \$245,000 bonds to construct roads.

Mountain City, Tenn.—Johnson county votes March 1 on \$200,000 bonds for road improvements.

Roby, Tex.—Fisher county votes February 17 on \$100,000 bonds to construct roads.

Contracts Awarded.

Baltimore, Md.—City awarded \$107,375 contract for sheet asphalt and bituminous paving, etc.

Houston, Tex.—City awarded \$49,000 contract for rock asphalt paving.

Lakeland, Fla.—City awarded \$176,000 contract for asphalt-concrete paving with clay base.

Ellicott City, Md.—State awarded \$61,296.80 contract to construct four-mile amiesite road.

Murfreesboro, Tenn.—City awarded contract for 22,900 square yards paving, also curb and gutter.

Fort Pierce, Fla.—Indian River Sales Co. awarded contract for constructing 21 miles of highway.

Wentworth, N. C.—Rockingham county awarded contract to construct 100-mile topsoil road.

Contracts to Be Awarded.

Albany, Ky.—Clinton county will construct about 22 miles of road.

Columbia, Ky.—City will improve streets at a cost of \$30,000.

Philippi, W. Va.—Barbour county will construct about 18.7 miles of macadam road, etc.

Georgetown, Ky.—City will improve streets at a cost of \$100,000.

Inez, Ky.—City will improve streets at a cost of \$20,000.

Jacksonville, Fla.—City receives bids until February 28 for 18,746 square yards bitulithic pavement on concrete base and 1514 square yards vitrified block gutter on concrete base.

Lenoir, N. C.—City has \$150,000 available for constructing streets and sidewalks.

Olive Hill, Ky.—City will improve streets at a cost of \$40,000.

Snyder, Tex.—City will expend \$60,000 to construct paving.

Tomkinsville, Ky.—City receives bids until February 28 to improve streets; cost \$25,000; also receives bids until March 2 to construct 12-mile road around city.

Whitley City, Ky.—City will pave streets; cost \$30,000.

Road Builders' Plans for Annual Meeting and Road Show.

In arranging the program for the Seventh American Good Roads Congress, to be held in Boston, Mass., February 5 to 9, under the auspices of the American Road Builders' Association, the committee in charge

has selected a number of leading subjects and has decided to devote an entire session or a definite part of a session to the consideration of each topic. Each will be introduced in a formal paper prepared by a leading authority, and the subject will then be open for discussion by the delegates. Among the subjects to be treated at the various sessions are the following:

Bituminous roads and pavements and treatments. (Sheet asphalt, bituminous macadam, bituminous concrete, etc.)
Cement concrete roads and pavements.
Stone-block roads and pavements.
Wood-block roads and pavements.
Brick roads and pavements.
Traffic, its effect on design, construction and maintenance and its regulation.
Contractor's plant or equipment.
Earth, gravel, sand-clay and miscellaneous roads and pavements.

Among the papers which have been selected to be read during the convention are the following:

"Policy and Program of Government in Road Construction Under New Federal Aid Law," by Logan Waller Page, director, United States Office of Public Roads and Rural Engineering.

"Highway Engineering Education," by T. R. Agg, professor of highway engineering, Iowa State College.

"Best Practice in Concrete Road Construction," by H. E. Breed, first deputy commissioner, New York State Commission of Highways.

"Bituminous Roads and Pavements," by William R. Farrington, division engineer, Massachusetts Highway Commission.

"The Excavation, Manipulation and Transportation of Materials," by John H. Gordon, Albany, N. Y.

"Recent Practice in Granite-block Pavements," by Wm. H. Connell, chief, Bureau of Highways and Street Cleaning of Philadelphia, Pa.

"Recent Practice in Wood-block Pavements," by Ellis R. Dutton, assistant city engineer of Minneapolis, Minn.

"Best Practice in Brick Pavement Construction," by F. R. Williams, paving engineer of Cleveland, Ohio.

"Traffic Census; Its Application to the Design of Roadways, Selection of Pavements and Traffic Regulation," by D. B. Goodsell, assistant engineer, Department of Public Works of the Borough of Manhattan, New York City.

"Earth and Gravel Road Maintenance," by R. L. Morrison, professor of highway engineering, Agricultural and Mechanical College of Texas.

The first session of the congress will be called to order Tuesday morning, February 6, by the president of the American Road Builders' Association. Governor S. W. McCall of Massachusetts and Mayor James M. Curley of Boston will welcome the delegates to the State and city, respectively, and other addresses will be made by Col. Wm. D. Sohler, chairman of the Massachusetts Highway Commission; Charles F. Weed, president of the Boston Chamber of Commerce; George W. McNear, president of the Bay State Automobile Association, and John M. Keyes, vice-president Massachusetts Highway Association. President A. W. Dean will make the response for the association.

A particularly interesting feature of the convention will be the Question Box. Questions to be discussed must be handed in at the registration booth not later than noon February 7.

The reports of committees will be presented at a business meeting of members of the association on Thursday.

The Eighth National Good Roads Show, to be held in conjunction with the Road Congress during the week, will be one of the most successful in the history of the organization. The formal opening of the show will take place on February 5.

In addition to exhibits by the leading manufacturers of materials, equipment, machinery and supplies used in road and street building, there will be special exhibits covering various interesting phases of road work by the United States Government, Florida State Road Department, Maine State Highway Commission, Massachusetts Highway Commission, New Hampshire State Highway Department, New Jersey Department of Public Roads, Harvard University, and the Massachusetts Institute of Technology.

A partial list of those exhibiting at the Road Show includes the following:

Acme Road Machinery Co., Frankfort, N. Y.
J. D. Adams Company, Indianapolis, Ind.
American Car Sprinkler Co., Worcester, Mass.
"American City," New York, N. Y.
American Tar Co., Boston, Mass.
Amies Road Co., Easton, Pa.
Asbestos Protected Metal Co., Pittsburgh, Pa.
Alpha-Bric Corporation, New York, N. Y.
Atlantic Refining Co., Philadelphia, Pa.
Autocar Company, Ardmore, Pa.

John Baker, Jr., New York, N. Y.
Barber Asphalt Paving Co., Philadelphia, Pa.
Barber Asphalt Paving Co. (Iroquois Works), Buffalo, N. Y.

Barrett Company, New York, N. Y.
Bitoslag Paving Co., New York, N. Y.
Harold L. Bond Company, Boston, Mass.
Boston Trailer Co., Boston, Mass.
Bucyrus Company, South Milwaukee, Wis.
Buffalo-Springfield Roller Co., Springfield, Ohio.
Philip Carey Company, Lockland, Cincinnati, Ohio.
Cast Iron Pipe Publicity Bureau, New York, N. Y.
Clinton Wire Cloth Co., Boston, Mass.
Concrete Steel Co., New York, N. Y.
F. D. Cummer & Son Company, Cleveland, Ohio.
Denmo Company of Boston, Boston, Mass.
Dunn Wire-cut Lug Brick Co., Conneaut, Ohio.
Duplex Truck Co., Lansing, Mich.
Dyar Supply Co., Cambridge, Mass.

H. P. J. Earnshaw, Boston, Mass.
East Iron & Machine Co., Lima, Ohio.
Edson Manufacturing Co., Boston, Mass.
"Engineering News," New York, N. Y.
"Engineering Record," New York, N. Y.
Franklin Contracting Co., New York, N. Y.
Garford Motor Truck Co., Lima, Ohio.
General Equipment Co., New York, N. Y.
General Motors Truck Co., Pontiac, Mich.
"Good Roads," New York, N. Y.

Good Roads Machinery Co., Kennett Square, Pa.
Granite Paving Block Mfrs. Assn., Boston, Mass.
L. E. & W. Gurley, Troy, N. Y.
George Hals Manufacturing Co., New York, N. Y.
Hastings Pavement Co., New York, N. Y.
Headley Good Roads Co., Philadelphia, Pa.
Hell Co., Milwaukee, Wis.

Hetherington & Berner, Indianapolis, Ind.
Fred A. Houdette & Son, Inc., Boston, Mass.
Chas. Hvass and Company, New York, N. Y.
Independent Coal Tar Co., Boston, Mass.
International Harvester Co. of America, Chicago, Ill.
International Motor Co., New York, N. Y.

Jennison-Wright Company, Toledo, Ohio.
Keystone Driller Co., Beaver Falls, Pa.
Kinney Manufacturing Co., Boston, Mass.
Koehring Machine Co., Milwaukee, Wis.
Lansing Company, Lansing, Mich.
Lebanon Machine Co., Lebanon, N. H.
Lenox Motor Car Co., Boston, Mass.
Locomobile Company of America, Boston, Mass.
Mack Motor Truck Co., Cambridge, Mass.
"MANUFACTURERS RECORD," Baltimore, Md.
R. B. McKim Company, Inc., Boston, Mass.
Metropolitan Paving Co., Cleveland, Ohio.
"Municipal Journal," New York, N. Y.
New England Road Machinery Co., Boston, Mass.
New England Truck Co., Fitchburg, Mass.
Orenstein-Arthur Koppel Company, Koppel, Pa.
Portland Cement Association, New York, N. Y.
Portland Stone Ware Co., Boston, Mass.
Robeson Process Co., New York, N. Y.
C. P. Rockwell, Inc., Boston, Mass.
Chris. D. Schramm & Son, Philadelphia, Pa.
Standard Oil Co. (Indiana), Chicago, Ill.
Standard Oil Co. of New York, New York, N. Y.
Sterling Motor Truck Co., West Allis, Wis.
Thew Automatic Shovel Co., Lorain, Ohio.
Turbine Sewer Machine Renovating Co., Milwaukee, Wis.
United Gas Improvement Co., Philadelphia, Pa.
United States Asphalt Refining Co., New York, N. Y.
United States Cast Iron Pipe & Foundry Co., Burlington, N. J.

Warren Brothers Company, Boston, Mass.
L. A. Weston, Adams, Mass.
White Company, Boston, Mass.
Wiard Plow Co., Batavia, N. Y.
Wyoming Shovel Works, Wyoming, Pa.

As every evidence points to 1917 being the greatest year in the history of road building in the country, and with funds becoming available for additional work under the Federal road law, it is believed this will be the most important convention of the American Road Builders' Association that has yet been held. It is anticipated there will be an especially large attendance of road-building officials, engineers and contractors who are desirous of obtaining the benefits of the discussions that will take place covering developments of road design and construction that will be brought out in the meetings of the convention.

West Virginia Good Roads School.

Under the joint auspices of the West Virginia State Road Bureau and the College of Engineering, the school of good roads will be held in Morgantown from February 6 to 16. Many of the prominent engineers and others interested in the road movement of West Virginia have signified their intention of being present.

This representative gathering of West Virginians, together with experts from the National Government and the various other States and colleges, will make this the most successful gathering of road men ever held in the State.

TEXTILES

Cotton Ginning and Consumption.

The number of bales of cotton ginned from the growth of 1916 prior to January 16, 1917, and comparative statistics to the corresponding date in 1916 and 1915, crops of 1915 and 1914, as given by the Census Bureau, was as follows:

RUNNING BALES.

(Counting round as half-bales and excluding linters.)

State.	Ginned prior to January 16, 1917.	1916.	1915.
United States.....	11,147,118	10,751,990	14,915,850
Alabama	543,987	1,012,902	1,676,349
Arkansas	1,069,297	762,487	941,426
California	31,725	23,545	34,975
Florida	50,625	55,025	88,131
Georgia	1,825,629	1,918,836	2,395,054
Louisiana	437,232	333,814	434,698
Mississippi	780,862	897,122	1,143,787
Missouri	57,041	44,022	72,335
North Carolina	659,419	709,485	855,367
Oklahoma	810,419	573,324	1,147,481
South Carolina	936,706	1,149,187	1,424,709
Tennessee	362,773	286,503	342,877
Texas	3,543,292	2,964,135	4,125,919
Virginia	26,602	15,233	22,292
All other	11,599	6,450	11,449

The statistics in this report include 189,004 round bales for January 16, 1917; 106,968 bales for 1916, and 50,942 for 1915. The number of sea-island bales included is 115,463 for January 16, 1917; 90,671 for 1916, and 79,515 for 1915. The distribution of sea-island cotton for 1917, by States, is Florida, 35,877; Georgia, 76,328, and South Carolina, 3258.

The statistics of this report for 1917 are subject to slight corrections when checked against the individual returns of the ginner being transmitted by mail. The correct statistics of the quantity of cotton ginned this season prior to January 1 are 11,045,351 bales.

Consumption, Stocks, Imports and Exports—United States.

Cotton consumed during the month of December, 1916, amounted to 536,587 bales. Cotton on hand in consuming establishments on December 31 was 2,362,960 bales, and in public storage and at compresses 4,065,178 bales. The number of active consuming cotton spindles for the month was 32,864,474. The total imports for the month of December, 1916, were 34,339 bales and the exports of domestic cotton, including linters, were 737,502 bales.

World Statistics.

The world's production of commercial cotton, exclusive of linters, grown in 1915, as compiled from published reports, documents and correspondence, was approximately 18,650,000 bales of 500 pounds net, while the consumption of cotton (exclusive of linters in the United States) for the year ending July 31, 1916, was approximately 21,011,000 bales of 500 pounds net. The total number of producing cotton spindles, both active and idle, is about 148,500,000.

Adding 9000 Spindles, 150 Looms, Etc.

New equipment to include 9000 spindles, 150 looms, 45 cards, etc., will be added by the Baldwin Cotton Mills of Chester, S. C., all contracts having been awarded. The looms are being furnished by the Draper Company of Hopedale, Mass., and the other machinery by the Saco-Lowell Shops of Lowell, Mass. J. E. Sirrine of Greenville, S. C., is the architect-engineer in charge, and the Fiske-Carter Company, also of Greenville is the contractor for building additions. The latter are nearing completion, and include a 64-foot addition to weaverroom, a picker-room, three warehouses and 145 cottages for operatives.

Tennessee Textile Mills.

An equipment of machinery costing \$30,000 has been ordered by the Tennessee Textile Mills, Chattanooga, Tenn., recently incorporated with \$100,000 capital. It will have a daily capacity of 1000 dozen pairs of hose, and will be installed in a factory which the company has purchased for remodeling. Clarence E. Keene will be superintendent and general manager.

Textile Notes.

The Superior Woolen Mills, Parkersburg, W. Va., will establish a plant at Louisville, Ky.

New machinery will be added during 1917 by the Bladenboro (N. C.) Cotton Mills.

Several cards and new machinery to increase picker-room capacity have been added by the Puritan Hosiery Mills of Louisville, Ky.

The McGee Manufacturing Co., Greenville, S. C., will add 2000 spindles, and has ordered this new machinery.

The Wigginsboro (S. C.) Mills will increase manufacturing facilities and plans to extend in the near future, but no definite plans have been determined.

H. H. Luedecke, Pittsburg, Tex., may establish a mill for spinning cotton yarn, and is inviting prices on the necessary machinery.

A branch mill will be established at Birmingham, Ala., by the Buster Brown Hosiery Mills of Chattanooga, Tenn. It will have a daily capacity of 2000 dozen pairs of misses' hose.

MINING

\$1,000,000 FOR BETTERMENTS.

West Virginia Company to Mine 3,000,000 Tons of Coal Annually—Additional Output of 1,500,000 Tons.

The proceeds of the recently announced \$1,000,000 bonds of the Main Island Creek Coal Co., Charleston, W. Va., will be invested for additional developments on Main Island Creek, and will add 1,500,000 tons to the company's annual output. Summarizing these betterments, John Laing, president of the Main Island corporation, writes to the MANUFACTURERS RECORD:

"This money is to be spent in the further development of additional mines on the headwaters of Main Island Creek, in Logan county; \$350,000 will be expended in railroads, side-tracks, tipples, etc., and the remaining \$650,000 will be used in the purchase of mine cars, locomotives, mining machinery, power station, etc. Orders for these supplies have already been placed. The machinery and supplies generally are now coming in, and we will be shipping coal from the eight additional mines by July 15. We will begin shipments from the first two mines under development on February 15. The present capacity of our mines, now open for shipping coal, is 1,500,000 tons per year, and this new development will increase our capacity to 3,000,000 tons per year. The present mines are all being opened in what is known as Main Island Creek seam of coal, with an average thickness of 6 feet 2 inches, good top, with excellent mining conditions generally."

Consolidation Coal Co. Increases Capital.

An increase of capital stock to the extent of \$5,800,500 has been decided upon by the Consolidation Coal Co. of Fairmont, W. Va., Baltimore and New York. Referring to this additional capitalization, A. S. Dunham, general auditor, Baltimore, writes to the MANUFACTURERS RECORD:

"On the recommendation of the president and board of directors, the stockholders approved and authorized the fixing of the capital stock of this company at \$45,000,000, and the distribution to the stockholders of record at close of business on the second day of February, 1917, sufficient of said stock to pay a dividend of the accumulated earnings at rate of \$5 per share to each share of record on said date, and the remainder of the addition will be available for issue, subscription and sale from time to time as the president and directors may deem necessary or expedient for capital expenditures of the company."

Plans of \$3,000,000 Coal Company.

Permanent organization has been effected by the Simpson Creek Coal Co., Simpson, W. Va., recently incorporated with a capital of \$3,000,000. This company

acquires the James Clark coal lands in Taylor and Barbour counties, including the New York mine at Simpson Creek, near Astor, from which point the Baltimore & Ohio Railroad Co. will build a branch railway to the property. Near Astor a mining city will be built and electrical mining equipment will be installed.

Officers are: President, J. W. Galloway, New York and Baltimore, also president of the Maryland Coal Co. of West Virginia and the Maryland Coal Co. of Maryland; vice-president, David Williamson of Wendel, W. Va.; secretary-treasurer, J. M. McGowan of New York.

Ragland Coal Development.

A daily output of 500 tons of coal is planned for the 750-acre development of the Ragland Coal Co., which has been organized with \$100,000 capital and the following officers: T. R. Ragland, president and manager; T. E. Bibb, vice-president; Joel L. Smith, secretary-treasurer; main offices at Beckley, W. Va. The development is located at Pemberton, W. Va., and the machinery to be installed will include electric motors, cutters, motor generator set and pumps. Equipment proposals are now being considered. F. W. Wilfong of Beckley is the construction engineer.

King Graphite Co.

A 260-acre graphite property in Alabama will be developed by the King Graphite Co. of Lineville, recently incorporated with \$100,000 capital. The daily output has not been determined, but the machinery is to include crushers, crushing rolls, electric motors, burr mills, pump, etc. Officers have been elected as follows: President, T. R. Bell; vice-president, D. D. Mitchell; secretary-treasurer, Charles E. Smith.

Graphite Plant Costing \$50,000.

Organization has been effected by the National Graphite Co., Ashland, Ala., recently incorporated, Geo. Ferre of Decatur, Ill., being president and Theodore Fisher being secretary. A plant with a 10-hour capacity of 150 tons will be installed, and the graphite machinery is to cost \$50,000. J. A. Barr of Mt. Pleasant, Tenn., is the construction engineer.

To Mine Letcher County Coal.

Coal mines in Letcher county, Kentucky, will be developed by the Letcher County Coal Corporation, which has been incorporated with a capital stock of \$500,000 and offices at Richmond, Va. Lucius F. Cary is president and W. M. Cary is secretary-treasurer.

To Develop Virginia Mines.

Virginia property will be developed by the Cambro-Clinton Mining Corporation, which has been incorporated at Richmond, Va. The capitalization is \$300,000 and the officers are Lewis C. Williams, president, and Cyrus W. Beale, secretary-treasurer.

American Sugar Machinery in Demand in the Barbados.

The interruption of shipping communications between England and Barbados has caused the merchants and planters of this island to turn to the United States for an increasing proportion of their requirements in the way of merchandise and agricultural machinery.

As a result of the prosperity of the planters numerous plans for improvements and extensions of their sugar factories are on foot, involving the purchase of new and modern sugar machinery. Unable to readily obtain their machinery in England as heretofore, they have turned to the American machinery manufacturers, but unfortunately the overcrowded condition of American factories and congested freights has resulted in delay in filling orders.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Hardwood Manufacturers Meet.

The fifteenth annual meeting of the Hardwood Manufacturers' Association of the United States was held in Cincinnati, O., this week. In his annual address President B. B. Burns dwelt especially upon the great need of closer co-operation among those engaged in the business, in order to promote the healthy growth and broadest development of the hardwood industry. He reviewed conditions during the past year, and stated that the outlook for 1917 was of unprecedented brightness. He especially urged the need of more loyal support to organized effort, closer co-operation, development of accurate cost accounting, uniform standard of inspection, thereby producing legitimate competition and better value.

Other formal addresses at the meeting were:

"Co-operation in the Lumber Industry, by R. S. Kellogg, secretary of the National Lumber Manufacturers' Association, Chicago, Ill.

"Salesmanship," by F. X. Wendling, vice-president and general sales manager Dalton Adding Machine Co., Norwood, O.

"Co-operation," by W. H. Parker, professor of sociology, University of Cincinnati, Cincinnati, O.

"True Costs and the Co-operative Work of the Federal Trade Commission," by Robert E. Belt, chief accountants Federal Trade Commission, Washington, D. C.

"The New Way and the Old Way," by Judge L. C. Boyle, Kansas City, Mo.

There was also a discussion of business conditions, led by F. R. Gadd, Chicago, Ill., vice-president of the Wisconsin Lumber Co. Reports of committees were made by W. E. De Laney, chairman Executive Grading Commission, on "Changes in Oak Rules," and by M. W. Stark, chairman Committee on Open Price Plan.

Large Tract of Spruce Timber Sold to North Carolina Paper Makers.

Asheville, N. C., January 27—[Special.]—The most important timber land deal Western North Carolina has known in a number of years was closed recently with the purchase by the Champion Fiber Co. of 23,000 acres in Swain county. It lies along the forks of the Oconalufy River, and extends to the ridge of the Smoky Mountains.

The timber is designated as spruce, although, of course, other woods are found also in the boundary. Of this acreage, 15,000 acres were bought from the Southern Spruce Co. and 8,000 acres from the Woodbury Lumber Co. (Harris-Woodbury).

The price paid represents, it can be said on the best of authority, a large advance over the acreage price of the last preceding timber land sale in this section. The total consideration falls not greatly short of \$500,000.

The property is soon to be opened up by building a railway from Cherokee Indian School up the Oconalufy River. It is seven miles from Cherokee to the junction with the Murphy branch of the Southern, a little west of Whittier. Sawmills will be built, it is expected, the coming summer.

The purchase means a large increase added to the wood supply of the fiber company for its mill at Canton.

Northern Lumbermen Inspecting Southern Conditions.

Jacksonville, Fla., January 29—[Special.]—Prominent lumber manufacturers, numbering 100, members of the Ohio Lumber Dealers' Association, arrived in Jacksonville Monday on a tour of investigation of the various big lumber centers of the South and to later attend a convention in New Orleans. The party was organized in Columbus, O., by D. R. Winn of that city, and is traveling on a special train. The purpose of the tour of the various Southern lumber centers, according to Mr. Winn, is for the lumbermen to familiarize themselves with lumber conditions, both output and local demand. The lumbermen were escorted to the big mills of the Neummer Lumber Co. at this city, and made

a side-trip to Port St. Joe, where they visited the mills of the Carpenter, O'Brien & Port St. Joe Lumber Co. They go from here to Livoka, Perry, Hampton Springs and Green Cove Springs, and then on to New Orleans.

Another party of lumbermen, composing members of the Southwestern Lumber Dealers' Association of Kansas City, will arrive in Jacksonville Wednesday on a special train for the purpose of investigating conditions in this section. They will visit the Bahamas and Cuba before returning to Kansas City.

Land Show in Atlanta February 1-15.

Preparations for the Land Show of four Southeastern States, to be held in the big auditorium armory at Atlanta February 1-15, have been expedited so that everything would be in complete readiness on the date of opening. The management has been highly complimented by A. A. Ormsby, assistant to the chief of exhibits of the United States Department of Agriculture. Twenty-five thousand copies of the Land Show book, explaining the objects and scope of the exhibition and briefly sketching the potentialities of the land to be represented, have been distributed among individuals and railroad agents and real estate men for individual distribution by them among patrons and clients. Another edition of 10,000, with some additional matter, including a day-to-day program of the show, will be given visitors to the exhibits.

The show should prove a great stimulus to the section represented; from within by awakening the present residents to the land's wealth, from without by calling the attention of people in other parts of the land to the splendid opportunities South.

Visit of the Lake Superior Mining Engineers to the South.

The members of the Lake Superior Mining Institute who are to visit the South in March will travel by a special train which will leave Chicago at 11.30 P. M. March 10. The train will stop at High Bridge and at other points of interest en route. The entire train will be parked upon arrival at Chattanooga and sleeping cars will be occupied over night. On March 12 the party will leave Chattanooga terminal station 8.45 A. M. in sight-seeing cars for a trip through Chickamauga National Military Park, Missionary Ridge and the National Cemetery. They will leave Patten Hotel for the trip to the summit of Lookout Mountain in sight-seeing cars at 2 P. M., and will leave Chattanooga at midnight for Birmingham, where they will spend March 13, 14 and 15, leaving there for Knoxville, where the party will be entertained by the Knoxville Chamber of Commerce and the ladies will be looked after by special committee of Knoxville ladies. During the afternoon the special train will be moved to Mascot, Tenn., 14 miles east of Knoxville, for an inspection of the plant of the American Zinc Co. This plant comprises four shafts, with a daily output of 3000 tons, is electrically operated with a force of some 1200 men.

Onion Outlook in Texas Good.

An estimate by the Department of Agriculture of the prospect for the Texas Bermuda onion crop states the outlook to be very good. In December freezing somewhat delayed planting. However, the estimated crop as of January 15 is 15 points above that of January 1. With timely rainfalls the opening of the shipping season, about April 5 to 10, should find a bountiful crop of Bermuda onions in Texas.

The Cotton Movement.

In his report of January 26 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 179 days of the season was 9,951,638 bales, an increase over the same period last year of 1,197,394 bales. The exports were 3,663,649 bales, an increase of 965,777 bales. The takings were, by Northern spinners, 1,762,205 bales, a decrease of 35,601 bales; by Southern spinners, 2,915,695 bales, an increase of 537,577 bales.

PAPER FROM COTTON STALKS.

Philadelphia Paper Makers Investigating Possibilities in Texas—Regard Proposition as a Feasible One.

Austin, Tex., January 26—[Special.]—In response to an invitation of Governor James E. Ferguson, two expert paper manufacturers, R. Daetwyler and M. W. Marsden of Philadelphia, arrived here several days ago and have been making an investigation into the possibilities of utilizing cotton stalks for paper-making purposes. The State Department of Agriculture has been conducting a research along this line for several months and it has considerable information and data bearing upon the subject, which is turned over for the use of Messrs. Daetwyler and Marsden.

As a practical demonstration of the character of paper that may be manufactured from cotton stalks, there has been placed on exhibition in the State Department of Agriculture samples made from this product, ranging from high grades of writing paper to wrapping paper and including newsprint.

"A mill having a cotton-growing country of a radius of 50 miles," declared Mr. Daetwyler, "would be able to run 12 months in the year and manufacture over 30 tons of paper in a day. If only a small percentage of the stalks in the State were utilized, the demand from Texas newspapers and magazines and stationery houses could be met and a surplus would be left for exportation."

Mr. Daetwyler estimated that a mill drawing its stalks from a radius of 20 miles would be able to pay the farmers enough for their stalks to make it a business proposition for them to harvest and bale the plants. If the stalks are cut while green or immediately after frost strikes them, the yield will be two or more tons an acre. The cotton which remained in the boll would have to be threshed. While this would lower the grade of the cotton, on the one hand, it would increase the yield, on the other, for the machine also takes the lint and seed from the bolls, which do not open before frost strikes them. The cutting and threshing is common practice in North Texas on account of earlier frost.

As an encouragement for the establishment of a mill to manufacture paper from cotton stalks the Legislature will probably pass a bill exempting from taxation for a period of three years the proposed industry. Fred W. Davis, State Commissioner of Agriculture, has been actively promoting the organization of a company for the purpose of building a cotton-stalk paper mill, and it is believed that the project will be put into effect in the near future. The fact that a machine has been invented and is now being manufactured at Wichita Falls, Tex., for threshing cotton will, it is believed, be of much value to the utilization of cotton stalks in the manufacture of paper. This is the opinion of Wilhelm Webe, cotton expert of the State Department of Agriculture.

To Manufacture Safety Rail Joints.

Insulated rail joints, rail bolt nuts for track frogs and crossings, etc., will be manufactured by the Ballou Safety Rail Joint & Nut Co. of Roanoke, Va. This corporation plans to erect a \$100,000 mill construction building and to install machinery to include electric motors, automatic screw machines, upsetting machines, gang drills, oil furnaces, oil tanks, drill presses, bolt machines with continuous furnace, rolls for manufacturing angle bars, etc. The equipment is wanted, and correspondence is to be addressed to C. E. Ballou, manager. Other officers are M. D. Hays, president, W. O. Walker, secretary, both of Pittsburgh, and H. E. Hogan of Roanoke, vice-president.

Using Old Brewery for Diversified Industries.

Forty million matches, 1500 pounds of glue, 1000 pounds of paste and 1000 pounds of nitrated products will be the daily capacity of the Wheeling (W. Va.) Chemical Products Co., which has organized with a capitalization of \$300,000.

The company is building its own machinery, and will install equipment in buildings formerly used for a brewery. Its officers are A. A. Schramm, president; H. C. Kalbetzer, vice-president; E. S. Romine, secretary; O. V. Snyder, manager.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ark., Little Rock.—Commrs. Free Bridge Dist., Herman Kahn, Chrmn., engaged Harrington, Howard & Ash of Kansas City, Mo., as engineers for rebuilding bridges; prepare plans for widening from 32 to 42 ft., strengthening so as to provide for interurban traffic, lowering grade, paving and electric lighting; 5 ft. sidewalk on each side of structure; estimated cost \$300,000, to be equally divided between district, county and Intercity Terminal Railway Co.

Md., Baltimore.—Board of Estimates engaged Wm. W. Emmart, 1102 Union Trust Bldg., Baltimore, to prepare plans for series of bridges in South Baltimore; 3 structures to be on third section of Key Highway and 2 on Hanover St.

Md., Georgetown.—Maryland State Roads Com., 601 Garrett Bldg., Baltimore, asks bids until Feb. 13 to construct lately-noted bridge across Sassafraz River between Kent and Cecil counties; also to build 2 duplicate bascule spans, 40 ft. clear, over Sinepuxent Bay, Ocean City. (See Machinery Wanted—Road and Bridge Construction.)

Md., Ocean City.—Maryland State Roads Com., 601 Garrett Bldg., Baltimore, asks bids until Feb. 13 to construct 2 duplicate spans, 40 ft. clear, across Sinepuxent Bay, Worcester county. (See Machinery Wanted—Road and Bridge Construction.)

Mo., Kansas City.—Board of Public Works let contract McMillan Contracting Co. of Kansas City at \$90,522 to construct 27th St. viaduct from the Paseo to Highland Ave.; reinforced concrete; 600 ft. long; 60 ft. wide. (Lately noted.)

Tex., Kingsville.—Kleberg County Commissioners let contract to construct concrete bridge across creek 1 mi. north of city.

W. Va., Philippi.—Barbour County, Barker Dist., will construct 12 concrete bridges; bids until Feb. 20. (See Road and Street Work. See Machinery Wanted—Road Construction.)

CANNING AND PACKING PLANTS

Fla., Miami.—Miami Pure Food Packing Co., capital \$25,000, inceptd.; Clemmens J. Hulsenkamp, Prest.; G. E. Fairfield, Secy.-Treas.

Md., Sykesville.—B. F. Shriver Co. of Westminster, Md., contemplates erecting cannery to cost \$40,000.

S. C., Orangeburg.—Orangeburg Packing Co. has plans and specifications for meat killing and packing plant; invites separate bids until Feb. 15 on erection of reinforced concrete and brick building and on complete packing plant equipment; plans and specifications from Wilson & Sompayrac, Architects, Palmetto Bldg., Columbia, S. C., or Packers' Architectural & Engineering Co., Manhattan Bldg., Chicago. (See Machinery Wanted—Packing Plant.)

Va., Roanoke.—Virginia Fruit Conserving Corp., capital \$125,000, chartered; Louis A. Scholz, Prest.; Henry Scholz, Secy.-Treas.

CLAYWORKING PLANTS

Ky., Olive Hill.—Fire-brick.—General Refractories Co., 903 Trinity Bldg., 111 Broadway, New York, advises Manufacturers Record further relative to lately-noted increased capacity: Present capacity in temporary building 70,000 daily; now erecting steel and fireproof building to replace plant destroyed a few weeks since; manufacture high-grade fire-brick; increase capacity to 100,000 daily; purchased all machinery and material.

Md., Baltimore.—Silica Fire Brick, etc.—American Refractories Co., Joliet, Ill., may establish plant to manufacture silica fire brick and other similar refractories; Emil Winter, Prest., Pittsburgh, writes to Manufacturers Record: Proposition under consideration; unable to give definite information at this time. (Noted in January as contemplating to build plant.)

Mo., Joplin.—Cement Tiling.—John L. Zeidler of St. Joseph, Mo., contemplates establishing \$75,000 plant.

Mo., Rich Hill.—Tile.—Dickey Clay Tile Works, Kansas City, Mo., will install additional machinery and increase capacity to 70 tons daily.

N. C., Wilson.—Tile Specialty Co., L. V. Butner, Prest., noted chartered in December, \$25,000 capital, states will conduct general tile business, installing ceramic tile and allied materials.

Tex., Dallas.—Cement Tiling.—John L. Zeidler of St. Joseph, Mo., contemplates establishing plant.

Tex., Denton.—Bricks.—Acme Press Brick Co. will erect brick and concrete fireproof building to replace burned plant; daily capacity, 70,000 brick. (Lately noted to rebuild burned plant.)

W. Va., Charleston.—Pottery.—American Pottery Co. purchased property of Charleston Foundry & Machine Co., South Side, and contemplates erecting pottery; L. E. Holderman of New Lexington, Ohio, to be Gen. Mgr.

COAL MINES AND COKE OVENS

Ky., Kimbley Mines.—Brentwood Coal Co., capital \$6000, inceptd. by E. S. Randle, Thos. Blades and Leonard Randle.

Ky., Hazard.—Hazard Coal Co. leased 1600 acres coal land and plans increasing output of 10,000 tons monthly.

Ky., Letcher County.—Letcher County Coal Corp., capital \$500,000, chartered; Lucius F. Cary, Prest.; W. M. Cary, Secy.-Treas.; both of Richmond, Va.

Ky., Paintsville.—Sandy River Coal Co., capital \$150,000, inceptd. by F. S. Cooper, H. S. Howes and G. H. Rice.

Ky., Perry County.—Tennessee Jellico Coal Corp., Louisville, acquired properties of Reliance Coal & Coke Co. in Perry County; will install machinery and make other improvements, which will probably increase monthly output from 10,000 to 20,000 tons; John P. Gorman of Lexington (Gen. Mgr. Hazard Coal Co.) will be Gen. Mgr.

Ky., Pineville.—Hawley Coal Co., capital \$200, inceptd. by W. E. Price, J. D. Cain and R. L. Maddox.

Ky., Pineville.—Joe Manning Coal Co., capital \$15,000, inceptd. by J. L. Manning, D. B. Logan and Ben F. Logan.

Ky., Pineville.—Gravity Coal Mining Co., capital \$2500, inceptd. by Geo. A. Daigle, Robt. Lyon and E. R. Short.

Ky., Williamsburg.—High Splint Coal Co., capital \$200,000, inceptd. by A. Gatliff, J. B. Gatliff and E. M. Gatliff.

Mo., St. Louis.—Ellis-Richmer Coal Co., capital \$10,000, inceptd. by Frank P. Ellis, H. C. Richmer and H. T. Blodgett.

Tenn., Knoxville.—Blue Diamond Coal Co. increased capital from \$150,000 to \$200,000.

Va., Coeburn.—Kilgore Coal Co., capital \$10,000, chartered; Lee Kilgore, Prest.; S. G. McCarty, Secy.

Va., Coeburn.—J. L. Litz purchased 2800 acres coal land about one-quarter mi. from Coeburn and will install mining plant.

W. Va., Bradshaw.—Bradshaw Pocahontas Coal Co., capital \$24,000, inceptd. by J. W. Strickler of War, W. Va.; A. J. McCoy of Blacksburg, Va., and others.

W. Va., Charleston.—Sterling Black Coal Co., capital \$25,000, inceptd. by M. C. Gilchrist, Homer Wiseman, H. W. Bowers and others.

W. Va., Charleston.—Charleston Domestic Coal Co. organized with \$25,000 capital; J. S. McVey, Prest.; Geo. W. Coyle, Secy.; both of Columbus, Ohio; Thad M. Boggs, V.-P. and Treas., 913 Kanawha National Bank Bldg., Charleston, wires and writes Manufacturers Record: Develop 900 acres; build tippie on Kanawha & Michigan R. R.; later build river tippie; install machinery for initial daily capacity 200 tons coal; invest \$20,000 for improvements and equipment.

W. Va., Fairmont.—Consolidation Coal Co., Fairmont, and 14 Wall St., New York, increased capital stock from \$39,190,500 to \$45,000,000; A. S. Dunham, Gen. Auditor, Continental Trust Bldg., Baltimore, advises Manufacturers Record: Stockholders approved increase and distribution of dividends to stockholders; remainder available for issue from time to time as necessary or expedient for capital expenditures.

W. Va., Fayetteville.—Long Branch Coal Co. increased capital from \$50,000 to \$150,000.

W. Va., Logan.—Main Island Creek Coal Co., John Laing, Prest., Charleston, W. Va., advises Manufacturers Record: Expend \$1,000,000 bond proceeds for development of additional mines on headwaters of Main Island Creek; \$350,000 for railroads, sidings, tipples, etc.; \$650,000 for purchase of mining machinery, power station, locomotives, mine cars, etc.; have let all contracts; begin new mine shipments by Feb. 15; present annual capacity 1,500,000 tons; will increase to 3,000,000 tons. (Lately noted to issue bonds, etc.)

W. Va., Ottawa.—Monte Mining Co., 319 10th St., Huntington, W. Va., organized;

Paul Hardy, Prest.; C. M. Gohen, V.-P.; R. P. Aleshire, Secy.-Treas.; develop 2000 acres. (Lately noted inceptd., capital \$10,000.)

W. Va., Pemberton.—Ragland Coal Co. organized with T. R. Ragland (Supt. West Virginia Coal Mining Co.), Prest., Skelton, W. Va.; T. E. Bibb, V.-P.; Joe L. Smith, Secy.-Treas.; leased and will develop 750 acres coal land. (Lately noted inceptd. with \$100,000 capital.)

W. Va., Pemberton.—Ragland Coal Co., Beckley, W. Va., organized with T. R. Ragland (Supt. West Virginia Coal Mining Co.), Prest. and Mgr., Skelton, W. Va.; T. E. Bibb, V.-P.; Joe L. Smith, Secy.-Treas.; leased and will develop 750 acres coal land; daily output 500 tons; F. W. Wilfong, Beckley, Constr. Engr. In Dec. noted inceptd., \$100,000 capital. (See Machinery Wanted—Mining (Coal) Machinery.)

W. Va., Prince.—J. W. Dwyer, Lewisburg, W. Va., will develop 1200 acres; Moody Halstead, Constr. Engr. (Lately noted, under W. Va., Beckley, as leasing 1200 acres on Piney River.)

W. Va., Sewell.—Coal Run Coal Co., Claremont, W. Va., capital \$200,000, organized; C. C. Beury, Prest., Treas. and Mgr.; George Lawton, V.-P.; R. S. Spilman, Charleston, W. Va., Secy.; develop 1148 acres; S. H. Bridge, Quinimont, W. Va., Constr. Engr.; contemplate installing electrically-operated machinery.

W. Va., Simpson.—Simpson Creek Coal Co., 1 Broadway, New York, and Munsey Bldg., Baltimore, organized with \$3,000,000 capital; J. W. Galloway, Prest. (also Prest. Maryland Coal Co. of West Virginia and Maryland Coal Co. of Maryland), New York and Baltimore; David Williamson, V.-P., Wendel, W. Va.; J. M. McGowan, Secy.-Treas., New York; acquired James Clark coal lands in Taylor and Barbour counties, W. Va., including New York mine at Simpson, now in operation; develop 2 new mines on Simpson Creek, near Astor, W. Va., where Baltimore & O. R. R. will build branch from Flemington into property; electrical mining equipment throughout; build town near Astor to be known as Galloway. (Lately noted incorporated to develop coal mines in Taylor and Barbour counties.)

W. Va., Stanaford.—Milwaukee Gas & Coke Co., Milwaukee, Wis., is reported to have purchased mines of Piney Mining Co.; improve and develop.

W. Va., Vaughan.—Greendale Mining Co., Box 737, Charleston, W. Va., capital \$50,000, inceptd.; P. A. McIntyre, Prest.; J. F. Redell, Secy.; S. G. Smith, Treas.; Herbert Hannigan, Mgr.; operating 375 acres; will acquire additional acreage; daily output 250 to 350 tons.

CONCRETE AND CEMENT PLANTS

Ky., Louisville.—Cement Blocks, etc.—Louisville Cement Products Co., capital \$2000, inceptd. by M. T. and M. M. Norris and P. V. O'Brien.

COTTONSEED-OIL MILLS

Tex., Chillicothe.—Harris, Irby & Vose Co. will build cottonseed-oil mill reported to cost \$100,000.

Tex., New Braunfels.—Landa Cotton Oil Co. will erect 40x400-ft. oil mill building; fireproof concrete construction; concrete floors; cost \$30,000; cost of lighting plant \$2000; plans by Bartlett & Ranney; construction by day labor.

DRAINAGE SYSTEMS

Ark., Blytheville.—Keystone Drainage Dist., A. C. Lange and C. E. Crigger of Blytheville and T. G. Staton of Marked Tree, Ark., Commrs., filed plans and specifications for drainage district to reclaim 300,000 acres in Mississippi, Craighead and Poinsett counties; plans, etc., by Morgan Engineering Co., Memphis, Tenn.; construct more than 300 mi. of channels and 34 mi. of levees; remove 30,000,000 cu. yds. of earth; utilize Right Hand Chute and Little River, as far as possible; main canal 5 mi. long, 250 ft. wide at base and 350 ft. at bank level 18 ft. deep; drain 20,000 acres through 3-barrel reinforced concrete culvert under main floodway; this will drain land lower than principal ditches, culverts being used to avoid cost of pumping water; estimated cost, \$3,000,000. (Noted in Jan. as having plans prepared, etc.)

Ark., England.—Lono County Drainage Dist. No. 5 contract, lately noted let to Oscar Koebitzky, England, calls for construction of 1 main 40-ft. bottom canal, with 6 laterals; dredge work; cost \$87,300; drain 28,000 acres; bid 9.7 cents per cu. yd.; 900,000 yds.; Dickinson & Watkins, Little Rock, Ark., Engrs.

Ark., Ozan.—Comms. Ozan Drainage Dist. No. 2, J. W. Butler, Chmn., let contract E. J. Hahn of Little Rock at \$50,000 to construct following canals: Excavation 759.29 chains main ditch; 220 chains main ditch, to be 20 ft. at bottom; 440 chains, 16 ft. at bottom; 99.39 chains, 14 ft. at bottom; also 91.21 chains lateral ditches, 14 ft. at bottom; excavation, 400,000 cu. yds. (Lately noted inviting bids.)

La., Jeanerette.—Iberia and St. Mary Drainage Dist., J. C. Akers, Pres., and Cyrenont Drainage Dist., C. P. Sims, V.-P., will construct drainage system to require dredging of 16,800 ft. 20-ft. canal, 98,500 yds.; 12,900 ft. 30-ft. canal, 140,000 yds.; 5900 ft. 40-ft. canal, 160,000 yds.; bids until Feb. 5. (See Machinery Wanted—Dredging.)

ELECTRIC PLANTS

Ark., Springdale.—E. Masoner applied for franchise to construct electric-light plant and water-works.

Fla., Homestead.—Town will construct electric-light plant; invites bids until Feb. 5; W. B. Caves, Town Clk. (See Machinery Wanted—Electric-Light Plant.)

Ga., Norman Park.—Norman Institute let contracts for machinery, cost \$4200, for electric-light and water plant lately noted to be rebuilt; building was not burned.

Ga., Valdosta.—Valdosta Lighting Co. plans to improve power station and cold-storage plant; cost \$100,000.

Ga., Tenuille.—City voted to contract for installation of electric-light system. Address The Mayor.

Ky., Butler.—C. E. Record is reported interested in installation of electric-light plant.

Ky., Fort Scott.—City voted \$15,000 bonds to install electric-light plant. Address The Mayor.

Ky., Hazard.—Kentucky River Power Co., R. L. Cornell, Gen. Mgr., Wootton & Morgan Bldg., has enlarged plans for central power station under construction; will install three 2000 H. P. turbines; construct larger buildings in proportion; operate 1 turbine by Feb. 10; now furnishing electric power for 16 mines in Perry County; has 50 mi. transmission system. (Previously reported building \$200,000 plant, to have 1 turbine, etc.)

Ky., Hazard.—City plans to improve electric-light plant; cost \$20,000. Address The Mayor.

Ky., Jamestown.—J. E. Russell and others are reported interested in installation of electric-light plant.

Mo., Festus.—Missouri Electric Co. is reported to have purchased municipal electric-light plant and as contemplating improvements to include extension of transmission lines to towns in county.

Mo., Sweet Springs.—City contemplates installation of additional oil engine and alternating current generator in electric-light plant. Address The Mayor.

Mo., Warrensburg.—City contemplates installation of electric-light plant. Address the Mayor.

Okla., Haskell.—City voted \$20,000 bonds to install electric-light plant. Address The Mayor.

Tenn., Hartsville.—Hartsville Light & Ice Co., capital \$10,000, inceptd. by G. M. Gwin, I. T. Littleton, Jr., R. M. Potts and others.

Tex., Alice.—Morrison & McCall of St. Louis, Mo., purchased Alice light plant; reported to improve and furnish electricity to San Diego, Tex.

Tex., Panhandle.—City (lately noted contemplating bonds) proposes to install electric-light and water plants; A. L. Henson, Mayor. (See Machinery Wanted—Electric Plants.)

Tex., Kosse.—Kosse Light & Power Co., capital \$12,000, inceptd. by L. T. Gibbs, W. D. Allen and W. E. Allen.

Tex., Wichita Falls.—Wichita Falls Electric Co., Wichita Falls, Tex., will construct electric system to Henrietta, 18 mi.

W. Va., Grafton.—Grafton Light & Power Co. will expend \$10,000 to increase equipment of power plant so as to double capacity.

FLOUR, FEED AND MEAL MILLS

Ky., Louisville.—Acme-Jones Co., capital \$30,000, inceptd. by J. H. Jones, Edgar H. Evans and W. J. Gathof.

N. C., Lumberton.—Robt. E. Lee, Farmers and Merchants' Bank Bldg., interested in proposed meal and grits mill. (See Machinery Wanted—Grits Mill, etc.)

N. C., Oxford.—White Wood Co. will install flour mill of 125-bbls. capacity, also corn mill; has placed machinery order; has building.

Okla., Enid.—Garfield Flour and Cereal Mills, capital \$5000, inceptd. by J. W. Oberescht, W. H. Oberescht and E. T. Oberescht.

W. Va., Fairmont.—Fairmont Grain & Milling Co., capital \$60,000, inceptd. by A. M. Rowe, J. F. Hare, G. J. Jackson and others.

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Pipe and Fittings.—Stockham Pipe & Fittings Co. will build additional plant to manufacture pipe and fittings; wires Manufacturers Record: Plant to cost \$200,000; steel and concrete construction buildings costing \$50,000; 18-acre site; safety devices for mechanical equipment; bath rooms, rest rooms, etc., for workmen.

Ky., Louisville.—Stoves and Utensils.—Bridgeford Mfg. Co., capital \$184,000, inceptd. by P. C. Doerhoefer, George Leff and J. W. Campbell.

Mo., Kansas City.—Railroad Frogs.—Walls Frogless Switch & Mfg. Co., 112 Waldheim Bldg., capitalization \$1,500,000, advises Manufacturers Record: John A. Martin, Pueblo, Colo., Pres.; Patrick H. Murray, Trinidad, Colo., V.-P.; Harlan J. Smith, Pueblo, Secy.; J. P. McElate, Mgr.; build plant at Rosedale, Kans., opposite Kansas City; erect 116x240-ft. concrete and steel fireproof building to cost \$100,000; builder selected, but name not yet announced; plans by H. H. Hill, address care of the Walls Co.; open machinery bids in March; daily capacity 30 railroad frogs. Lately noted organized, etc. (See Machinery Wanted—Machine Shop Equipment.)

stock \$5000, will drill 2 wells 3500 to 4000 ft. deep; open drilling bids March 1. (See Machinery Wanted—Well Drilling.)

Ky., London.—Laurel Oil & Gas Co., capital \$25,000, inceptd. by L. V. Mullen, C. J. Sipple, C. D. Pratt and R. C. Eversole.

Ky., Louisville.—Oil Refinery.—Standard Oil Co., A. K. Whitelaw, Supt., advises Manufacturers Record: Refinery will have daily capacity 2500 bbls. oil; reinforced concrete buildings; plans not completed; let contract Wm. Graver Tank Works, East Chicago, Ind., for building storage tanks; to Henry Vogt Machine Co., Louisville, for boilers and stills; to Illinois Stoker Co., Alton, Ill., for chain-grate stokers. (Lately noted increasing capital from \$3,000,000 to \$6,000,000 and having plans for refinery, etc.)

La., Shreveport.—Louisiana Gas & Fuel Co., capital \$2,000,000, inceptd. by O. A. Wright, N. C. McGowan, L. L. May and others.

Md., Lonaconing.—Lonaconing Oil & Gas Co., capital \$10,000, inceptd. by Duncan R. Sloan, Thos. J. Grindell, Andrew Spier and others; Mr. Spier to be resident agent.

Okla., Ardmore.—Hexagon Oil Co., capital \$30,000, inceptd. by Mark Kirkpatrick, J. H. Hinkle and E. B. Luke.

Okla., Elk City.—Cheyenne-Arapaho Oil & Gas Co., capital \$50,000, inceptd. by A. C. Taylor, T. R. Johnson and Frank Hunt.

Okla., Muskogee.—Stigler Producing Co., capital \$10,000, inceptd. by G. W. Fry, A. S. Nelson and L. C. Schlappkohl.

Okla., Newkirk.—Cruse Oil & Petroleum Co., capital \$6000, inceptd. by P. T. Wathor, J. C. Calhoun and F. E. Wathor.

Okla., Okene.—Farmers' Oil & Gas Co., capital \$30,000, inceptd. by Delmar A. Smith, C. T. Gillespie and T. H. Grennell.

Okla., Oklahoma City.—Napoleon Oil & Gas Co., capital \$100,000, inceptd. by Jim R.

also line to Pumpkin Center; will increase daily capacity (4000 bbls.) of refinery to 4000 bbls. (Supersedes Jan. item reporting increase of capital from \$4,000,000 to \$2,000,000, etc.)

Okla., Tulsa.—Majestic Petroleum Co., capital \$1,000,000, inceptd. by E. S. Horn, J. B. Meserve and J. E. Horn.

Okla., Tulsa.—Barbrook Oil & Gas Co., capital \$1,000,000, inceptd. by E. S. Horn, J. B. L. Brookins and A. W. Sipe, Jr.

Okla., Tulsa.—Tibbens Drilling Co., capital \$5000, inceptd. by C. G. Tibbens, Chas. W. Grimes and G. W. Keeselring.

Okla., Tulsa.—Scottish Oil, Gas & Refining Co., capital \$75,000, inceptd. by W. G. Crump of Oklahoma City, Max Greenberg of Oilton, Okla., and W. O. Allison of Kansas City, Mo.

Tex., Houston.—Batson-Hoskins Mound Petroleum Co., capital \$25,000, inceptd. by A. Sidney Smith, R. F. Smith and S. E. Echols.

Va., Colonial Beach.—Colonial Beach Gas & Oil Co. organized; E. S. Coates, Pres.; T. F. Mason, Secy.-Treas.; drill 2500 ft. for oil. (See Machinery Wanted—Well Drilling.)

Va., Norfolk.—Oil Refinery.—Gulf Refining Co. (main office, Pittsburgh, Pa.) purchased 30 acres on Southern branch of Elizabeth River on which to build plant.

W. Va., Charleston.—Southern West Virginia Oil & Gas Co., capital \$750,000, inceptd. by J. M. Hawkins and G. D. Miller of Huntington, W. Va.; R. R. Rucker and B. J. Prichard of Wayne, W. Va., and others; consolidates Wayne Light, Heat & Gas Co., Wayne Oil & Gas Co. and Belvard Oil & Gas Co.

W. Va., Huntington.—Gas.—Keystone Gas Co., capital \$50,000, inceptd. by John H. Holt, H. C. Dimick, Jr., W. E. Deegans and others.

W. Va., Weston.—Cayton Oil & Gas Co., capital \$25,000, inceptd. by B. F. Cayton, B. S. Stathers, Eugene Grant and others.

HYDRO-ELECTRIC PLANTS

N. C., Blewitt's Falls.—Carolina Light & Power Co., Raleigh, N. C., is having surveys made for additional power plant on Pee Dee River below Blewitt's Falls; understood that head of water 40 or 50 ft. high can be raised by building dam few hundred feet long; now developing 40,000 H. P. at Blewitt's Falls.

Tenn., Elizabethton.—J. H. Grayson of Bristol, Tenn., is reported to build dam across Watauga River, 5 mi. west of Elizabethton, and develop water-power.

W. Va., Hartland.—Hartland Power Co., W. S. Barstow & Co., Engrs.-Mfrs., 50 Pine St., New York, have final plans for electric generating station; install 1000 K. W. condensing steam turbine; develop 1350 H. P.; construct 5 mi. 13,200 volt transmission system; distribute electricity for coal mines. (Lately noted organized with \$2,000,000 capital, etc.)

ICE AND COLD-STORAGE PLANTS

Ark., Forrest City.—Forrest City Ice & Coal Co. will enlarge plant to give 20 tons daily capacity.

Ga., Valdosta.—Valdosta Lighting Co. plans to improve cold-storage plant and power station; cost \$100,000.

Ky., Grayson.—Bagby Jewelry Co. will install 5-ton ice factory in connection with present electric-light plant. (See Machinery Wanted—Ice Plant.)

Ky., Harlan.—Harlan Ice Refrigerating Co., capital \$10,000, inceptd. by Joe Ross, Elizabeth Ross, Hiram H. Owens and James D. Black.

Md., Lonaconing.—Kerns Ice Co., capital \$15,000, inceptd. by Thos. E. Boston and H. W. Dellinger of Lonaconing and Wm. D. Kerns of Piedmont, W. Va.

S. C., Lexington.—Corley Bros. Lumber Co. may install 10-ton ice factory. (See Machinery Wanted—Ice Plant.)

Tenn., Hartsville.—Hartsville Light & Ice Co., capital \$10,000, inceptd. by G. M. Gwin, I. T. Littleton, Jr., R. M. Potts and others.

Va., Crewe.—A. R. Sherwood will erect building for ice plant; remove equipment from present plant.

Va., Roanoke.—Armour & Co. (main office, Chicago, Ill.) will build plant; 4 stories; brick; main floor for cold storage; estimated cost \$50,000; J. H. Urquhart, Local Mgr.

Va., Staunton.—Blue Ridge Storage Co., W. G. Mathews, Pres. (lately noted inceptd., capital \$75,000), acquired plant of Rothwell Storage Co.; apple storage 45,000 bbls. capacity; plant fully equipped.

THE OFFICIAL PROPOSAL ADVERTISEMENTS

Appear This Week On Pages 100 and 101

Notices of bond sales, construction and improvement contracts to be let, equipment and supplies to be purchased, franchises offered, etc., inserted in this department bring bids from the most important bond buyers, investors, financial institutions, contractors, engineers, architects, manufacturers, and supply houses throughout the country.

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The PROPOSAL department goes to press 9 A. M. Wednesday for the issue of the following day. If you cannot mail advertisement in time for any particular issue please wire copy by night letter.

Send for booklet of testimonial letters from public officials who have used the PROPOSAL department of the Manufacturers Record, for bond sales, construction work, etc.

Tenn., Nashville.—Machine Shop.—Jakes Foundry Co., capital \$10,000, inceptd. by Robt. Jakes, J. W. Jakes, E. F. Jakes and others.

Tex., Dallas.—Tractors.—Dauch Mfg. Co. of Sandusky, Ohio, will establish branch distributing plant; erect 1-story fireproof building, 30x160 ft., at 1313 Young St.; also maintain repair department; F. O. Meyers to be manager.

Tex., Waco.—Structural Steel.—Stubbs Foundry & Machine Co. will build foundry to replace present plant; plans call for \$10,000 expenditure for new buildings and equipment; erect pattern shop, derrick and steel structural plant and foundry.

Va., Roanoke.—Rail Joints, etc.—Ballou Safety Rail Joint & Nut Co. (lately noted to build plant, etc.), 8 E. Campbell Ave., has following officers: M. D. Hays, Pres.; W. O. Walker, Secy., both of Pittsburgh; H. E. Hogan, V.-P.; C. E. Ballou, Mgr., both of Roanoke; erect \$100,000 mill-construction building; open proposals Mech. 1; bolt machines with continuous furnace; install automatic screw machines, oil furnaces, upsetting machines, gang drills, oil presses, oil tanks, electric motors, belting, etc.; manufacture rail bolt nuts for track frogs and crossings, insulated rail joints, etc.; later install rolls for manufacturing angle bars. (See Machinery Wanted—Foundry Equipment.)

W. Va., Wheeling.—Foundry.—Wheeling Mold & Foundry Co. increased capital from \$1,000,000 to \$1,500,000. (Lately noted as contemplated.)

GAS AND OIL ENTERPRISES

Ala., Mobile.—Continental Oil & Gas Co., City Bank Bldg., lately noted inceptd., capital

Jacobs and W. S. Sterrett of Oklahoma City and C. W. B. Hinds of Hugo, Okla.

Okla., Oklahoma City.—L. & R. Oil & Gas Co., capital \$5000, inceptd. by F. B. Collins, A. E. Pearson and C. W. Brooks.

Okla., Oklahoma City.—Oil-pipe Lines, etc.—Empire Refining Co. (subsidiary of Cities Service Co.) will invest \$1,500,000 to lay additional pipe lines connecting present systems with Oklahoma City, Ponca City, Cushing and Okmulgee oil refineries.

Okla., Oklahoma City.—Oil Refinery.—Home Refinery Co., 615 Herskowitz Bldg. (change of name from Consumers' Refining Co., in Sept. noted inceptd., capital \$250,000), will establish oil refinery described in Oct.; advises Manufacturers Record: Purchased 4 150 H. P. boilers, for March 1 delivery; buy other equipment for complete oil refinery, 2500 bbls. capacity; Jas. A. Jones, Pres.; C. M. Joiner, V.-P.; G. W. Dill, 2d V.-P.; J. L. Lyon, Treas.; J. C. Willingham, Secy.; A. D. Lloyd, Engr.; E. R. Kerby and A. T. Kellogg, Mech. Engrs. (See Machinery Wanted—Oil Refinery Equipment.)

Okla., Pawnee.—Gas System.—City retained Benham Engineering Co., Oklahoma City, as Consult. Engrs. to make survey to the gas supply, and to prepare plans and specifications for distributing mains and laterals for proposed gas system; vote on \$150,000 bonds contemplated. (Lately noted.)

Okla., Sapulpa.—Tarpon Oil Co., capital \$100,000, inceptd. by L. O. Lytle of Sapulpa, I. E. Cornelius of Muskogee, Okla., and Chas. H. Kadine of Dallas, Tex.

Okla., Sapulpa.—Oil Refinery.—Sapulpa Refining Co., Sapulpa, and Keyser Bldg., Baltimore, Md., has recently laid pipe line from refinery to Cushing field, distance 30 mi.;

IRON AND STEEL PLANTS

Mo., Sparrows Point—Shearing Mill.—Bethlehem Steel Co. (South Bethlehem, Pa.) let contract to Devoe Contracting Co., Pittsburgh, Pa., to construct reinforced concrete foundations for shearing mill building 106x100 ft.; superstructure to be of structural iron.

Tex., Fort Worth—Steel Furnaces, etc.—Texas Rolling Mill Co. contemplates replacing steam engines on present roll trains with electric motors, operating plant in future entirely by electricity; is installing open-hearth steel furnaces, 22-in. bar and billet mill and 8-in. hoop and cotton-tie train; Helene Co., Crafton, Pittsburgh, Pa., designed complement of rolls for hoop and cotton-tie train; groove arrangement for cotton-tie train to have entirely new means for distributing wear. (Noted in Nov. to enlarge plant to manufacture steel ties for cotton bales and as having begun installation of reverberatory reversible furnace to increase capacity 25 per cent.)

IRRIGATION SYSTEMS

Tex., Amarillo.—Canadian Valley Irrigation Co., capital \$25,000, incptd. by F. F. Works, G. S. Murphy, L. A. Ramsey, H. Reimann and others.

LAND DEVELOPMENTS

Ark., Bentonville.—Linebarger Bros. Realty Co. of Dallas, Tex., purchased 209-acre Bella Villa tract, including cave, spring and lake; will improve property, furnish electric light and power and construct driveways.

Ga., Atlanta.—Oscar Bergstrom of New York, and Mrs. Otto Kocher of San Antonio, Tex. (F. H. Priest of Atlanta, agent) are reported to expend \$500,000 to develop 260 acres on Howell Mill Rd.; improvements to include natatorium, development of spring, roadway and sidewalk paving, sewerage, electric lights, telephone, etc.

Ky., Crestwood.—Crestwood Farm Co. incptd. by Richard R. Elmore, F. G. Moran and Wm. Furlong.

Ky., Louisville.—J. B. Gathright Land Co., capital \$25,000, incptd. by J. B. Gathright, O. H. Harrison, Matt O'Doherty, W. H. Field and J. S. Clark.

La., St. Gabriel.—J. M. Landry Planting Co., capital \$10,000, incptd.; Emile D. Landry, Pres.; G. S. Landry, V.-P.; J. M. Landry, Secy.-Treas.

Mo., St. Helena.—Schwab City Development Co. organized with Julian S. Carter (Pres. Carter & Steffey, 18 E. Lexington St., Baltimore), Pres.; Geo. B. Marshall, V.-P., Birmingham, Ala.; Benj. F. Kagan, Secy., Chicago; Chas. H. Steffey, Treas., Baltimore; develop for residential purposes, 67 acres on Old Trappe Road; improvements to include electric lighting, water supply, sewer system, sidewalks, streets, etc.; Realty Specialists, Equitable Bldg., Sales Agts. (Realty Specialists lately noted incptd. in connection with this development.)

Okla., Drumright.—Ozark Land & Ranch Co., capital \$100,000, incptd. by Wm. R. Wensell, M. J. Hyland and J. M. Cochran.

Tex., Amarillo.—City votes Feb. 15 on \$75,000 bonds for parks. Address The Mayor.

Va., Petersburg.—Virginia-Carolina Land Corp., capital \$50,000, chartered; E. V. Verrell, Pres.; W. E. Burke, V.-P.; H. M. White, Secy.-Treas.; J. W. Ferrell, Asst. Secy. and Treas.

W. Va., Elkins.—Riverside Development Co., capital \$10,000, incptd. by J. G. O'Connor, J. N. Kochenderfer, Sam T. Spears and others.

LUMBER MANUFACTURING

Ala., Birmingham.—West End Lumber Co., capital \$500, incptd.; R. A. Moses, Pres.; W. J. Moses, V.-P.; W. R. Hancock, Secy.-Treas.

Ala., Selma.—B. B. Rudolph Lumber Co. incptd. by B. B. Rudolph, J. H. Sams and others.

Ark., Rison.—Sand Creek Land & Timber Co., capital \$10,000, incptd.; E. L. McLendon, Pres.; John T. Haskins, V.-P.; J. W. Elrod, Secy.-Treas.

Ark., Rison.—Sand Creek Land & Timber Co., capital \$10,000, incptd. by E. L. McLendon, John T. Haskins, J. W. Elrod and others.

Ark., Little Rock.—Newlin-Riley Lumber Co., capital \$50,000, incptd.; E. C. Newlin, Pres.; Jas. R. Riley, V.-P.; D. C. Bossinger, Secy.; G. S. R. Sharp, Treas.

Ga., Macon.—Young Lumber Co., capital \$50, incptd. by W. B. Young, J. W. Young and W. C. Redding.

Ky., Frankfort.—Lyons Lumber Co., capital \$16,000, incptd. by Greene R. Lyons, H. R. Lewis and U. B. Hulet.

Ky., Paintsville.—Hutchinson Lumber Co., Huntington, W. Va., purchased 1000 acres timber land on Paint Creek and will develop; probably manufacture into lumber at Huntington.

N. C., Hamlet.—Clark-Rhodes Lumber Co., Richmond, Va., P. E. Clark, Pres., and I. Rhodes, Secy.-Mgr., is erecting lately-noted building by own force; purchased machinery, cost about \$4000; manufacture long and short leaf yellow pine, hardwoods, box shooks, etc.; may install dry kiln in near future. (See Machinery Wanted—Kiln (Dry).)

N. C., Swain County.—Champion Fiber Co., Canton, N. C., purchased 23,000 acres timber land on Oconoluftee River for about \$500,000; plans development; cut timber; build mills; construct railway from Cherokee Indian School up Oconoluftee River, 7 mi., to junction with Murphy branch of Southern Ry., near Whittier; wires Manufacturers Record; Not at liberty to furnish details.

Okla., Poteau.—Strickland-Dye Lumber Co., capital \$5000, incptd. by Lloyd Strickland, I. A. Dye and Florence Dye.

S. C., Pamplico.—Dargan-Wagoner Co. will rebuild planing mill and install new machinery; daily capacity 60,000 ft.

Tex., Attoyac.—W. A. Parrott and J. W. Prince of Garrison, Tex., will develop timber land; installing sawmill.

Tex., Blooming Grove.—Farmers Lumber Co., capital \$5000, incptd. by J. L. Page, J. L. Dorsey, J. E. Gantt and others.

Tex., Oak Cliff, Sta. A., Dallas.—Oak Cliff Planing Mill & Mfg. Co., Box 313, organized; Mc. B. Clarke, Pres.; W. W. Green, Secy.-Mgr.; leased building; has equipment. (Lately noted chartered, \$6000 capital.)

Va., Norfolk.—Virginia-Carolina Lumber Vulcanizing Corp., capital \$600,000, chartered with Geo. W. Roper, Pres. and Gen. Mgr.; John M. Gibbs (Gen. Mgr. Foshburgh Lumber Co.), V.-P.; W. B. Roper, Secy.-Treas.; subsidiary of Lumber Tie & Timber Vulcanizing Co. of New York.

METAL-WORKING PLANTS

Mo., St. Louis.—Sheet Metal.—John Meeker will build plant to manufacture sheet-metal products.

Tex., Dallas.—Daltex Spring Bed Co. (lately noted) will manufacture spring beds and cots. (See Miscellaneous Factories.)

Va., Richmond.—Sash Locks.—Rothschild Ventilating Sash-Lock Corp., capital \$15,000, chartered; Aaron Rothschild, Pres.; Isaac Lichtenstein, Secy.-Treas.

W. Va., Fairmont.—Valves and Tanks.—American Valve & Tank Co., capital \$250,000, incptd. by C. W. Evans, J. L. Hall, H. J. Ross and others.

MINING

Ala., Ashland.—Graphite.—National Graphite Co. organized; Geo. Ferre, Decatur, Ill., Pres.; Theo. Fisher, Secy.-Mgr.; develop 160 acres; capacity 150 tons per 10 hours; cost of machinery \$50,000; J. A. Barr, Mt. Pleasant, Tenn., Constr. Engr. (Lately noted incptd., capital \$50,000.)

Ala., Birmingham.—Alabama Real Estate & Mineral Co., capital \$500, incptd.; A. Bridgen, Pres. and Gen. Mgr.; C. P. Leibold, V.-P.; M. A. Fonte, Secy.-Treas.

Ala., Clay County.—Mica.—Muscovite Mica Co., capital \$10,000, incptd.; will develop 318 acres mica property; Ross Blackmon, Atty., Anniston, Ala.

Ala., Lineville.—Graphite.—King Graphite Co. (lately noted incptd. with capital \$100,000) organized; T. R. Bell, Pres.; D. D. Mitchell, V.-P.; Chas. E. Smith, Secy.-Treas.; develop 260 acres; will install machinery. (See Machinery Wanted—Mining (Graphite) Machinery.)

Ala., Gadsden.—Iron Ore.—Jirama Ore Co., Eugene Weil, Secy.-Treas., purchased mineral rights to 5000 acres iron-ore land in Greasy Cove, Etowah County; capital \$100,000. (Lately noted organized to develop soft red iron ore.)

Ala., Talladega.—Graphite, etc.—Alabama Mineral Developing Co., capital \$40,000, organized to deal in and develop mineral properties within the State; Roland G. Spearman in charge; Geo. R. Burton, W. E. Henkle, and others interested; acquired graphite properties and plans organization of independent companies for development.

Ark., Everton.—Zinc.—Everton Mining & Development Co., Jack Walker, Gen. Mgr. will build 150-ton mill at Big Joe Mine.

Ark., Mountain Home.—Iron.—Shiras Bros.

and associates will install machinery to develop iron mines.

Ark., Rush.—Zinc.—A. A. Webber of Batesville organized company to develop mining property.

Fla., Lauraville.—Phosphate.—Suwannee Pulverized Phosphate Co., capital \$150,000, organized with T. M. Ware, Pres., Tampa, Fla.; acquired phosphate property; will install equipment for mining and pulverizing phosphate.

Mo., Cave Springs.—Zinc.—Vinegar Hill Zinc Co. is reported to build concentrating plant of 300 tons capacity.

Mo., Joplin.—Lead and Zinc.—Lincoln Mining Co. (Anthony Bros.), 511 First National Bank Bldg., Lincoln, Neb., Perry Anthony, Mgr., will install lately-noted mill; develop 9 acres; daily capacity, 50 tons dirt. (See Machinery Wanted—Concentrating Mills.)

Okla., Miami.—Missouri Mule Mining Co., lately (under Tulsa) noted chartered, organized; C. J. Fribley, Pres.; J. E. Allen, V.-P.; W. A. Powers, Secy., Treas. and Mgr.; will develop 20 acres. (See Machinery Wanted—Engine.)

Tenn., Chattanooga.—Barytes.—Barytes Mfg. Co., capital \$5000, incptd. by A. T. Whiteside, J. H. McAllister, V. B. Whiteside and others.

Va., Richmond.—Cambro-Clinton Mining Corp., capital \$300,000, chartered; Lewis C. Williams, Pres.; Cyrus W. Beale, Secy.-Treas.

Va., Richmond.—Glass Sand.—Cinchfield Glass Sand Corp. chartered with \$150,000 capital; office at 115 N. 8th St.; C. H. Barker, Pres.; E. P. Barker, Secy.-Mgr.; Sterling Boisseau, Treas.; controls 1000 acres; proposes installation plant with daily capacity 800 tons glass sand; equipment to include machinery for mining, grinding and pulverizing; also install carriers, tramways and conveyors for handling to loading station on railway one-half mi. distant down steep incline. (See Machinery Wanted—Mining Equipment, etc.)

W. Va., Charles Town.—Lime.—Natural Lime-Marl Co. will develop 45 acres; daily output, 100 tons lime-marl, dried and pulverized; machinery purchased; J. A. Jamison, Pres.; J. A. Jamison, Jr., V.-P.; Paul H. Jamison, Mgr.

W. Va., Huntington.—Ochre.—Federal Ochre Co., capital \$10,000, incptd. by Frank Ellington, C. T. Taylor, G. D. Miller and others.

MISCELLANEOUS CONSTRUCTION

Ala., Tuscaloosa.—Wharf.—City votes Feb. 5 on \$50,000 bonds to construct wharf. Address City Com. (Lately noted.)

Ark., Little Rock.—Mausoleum.—Mrs. H. M. Bennett is interested in erection of mausoleum in Mount Holly Cemetery; 200 crypts; probable cost \$75,000; plans by Chas. L. Thompson, Little Rock.

Fla., Fort Pierce.—Sea Wall.—John W. Pinkerton of Toledo, Ohio, purchased property fronting 100 ft. on river and authorized F. G. McMullen, Pres., St. Lucie County Bank, to have seawall, now under construction, extended so as to embrace this tract; estimated cost of extension \$10,000.

La., Tallulah.—Levee.—Comms. Fifth Louisiana Levee Dist. let contract Roach & Stansell of Memphis, Tenn., to construct Cottonwood Levee in East Carroll Parish, Mississippi River, right bank; contents 250,000 cu. yds. (Lately noted inviting bids.)

Mo., Baltimore.—Railway Tunnels, etc.—Pennsylvania R. R., Geo. R. Stinckson, Gen. Agt., Baltimore; A. C. Shand, Ch. Engr., Philadelphia, submitted to Mayor its plans for terminal improvements under consideration for several years; outlines betterments to cost \$15,000,000; construction to include 2 tunnels, 1 paralleling Hoffman St. tunnel and other partly paralleling Wilson St. tunnel; contemplates twin tubes similar to those of company in New York; open cuts, bridges, walls, elevated tracks, street widening, overhead crossings, etc.; no mention of electrifying system; municipal officials will consider plans.

Miss., Meridian.—Docks.—Meridian Lumber Co., L. L. Schertzer, Pres., Demopolis, Ala., will construct docks.

S. C., Charleston.—Sea Wall.—City will construct 1000 ft. of concrete seawall and will fill behind wall, requiring 25,000 cu. yds. of material to be dredged from river; bids until March 1; J. H. Dingle, City Engr. (See Machinery Wanted—Sea Wall Construction.)

Tex., Galveston.—Pleasure Pier.—Galveston Pleasure Pier Co., capital \$3000, incptd. by Wm. Gammon, J. E. Pearce and Hoskins Foster.

Tex., Galveston.—Steamship Piers.—Morgan's Louisiana & Texas R. R. & Steamship Co., C. W. Jungen, Gen. Mgr., 165 Broadway, New York, will, according to Galveston reports, build series of 5 piers; steel and concrete construction; approved plans and specifications for 3 piers; the 5 piers reported to cost \$4,000,000 to \$5,000,000; J. Kruttschnitt, Chmn., New York, wires Manufacturers Record; Announcement premature; nothing done except studies of plan to cover needs many years in future.

MISCELLANEOUS ENTERPRISES

Ala., Mobile.—Shipping.—Jordy & Co., capital \$10,000, incptd.; J. Numa Jordy, Pres.; Mrs. Luella Jordy, V.-P.; Naomi Levinsohn, Secy.

Ala., Selma.—Laundry.—Alabama Methodist Orphanage contemplates installing laundry to cost \$6000.

Ky., Ashland.—Amusement Devices.—Bay City Conster Co., capital \$24,000, incptd. by E. J. Lauterbach, D. H. Putnam and Watt M. Prichard.

Ky., Louisville.—Industrial Building.—Warehouse Architectural & Engineers' Co., C. H. Moores, Pres., Chicago, will erect building for manufacturing, storage, etc. (See Buildings Proposed—Warehouses.)

La., Kenner.—Steam Ferry.—Company organized with \$15,000 capital by Paul Felkx, A. Wattigny, A. C. Contanna and others to establish steam ferry.

La., Lafayette.—Fire Alarm System.—City voted to levy tax to construct fire-alarm system. Address The Mayor. (Noted in Nov.)

Mo., Flintstone.—Water Bottling.—Flintstone Magnesia Spring & Development Co. (office with Burns Employment Agency, 42 Bedford St., Cumberland) incptd. with \$10,000 capital by Geo. Ruhl, Mary Catherine Ruhl and Jas. B. Burns, all of Cumberland; Mr. Burns to be resident agent; will bottle mineral spring water; also proposes erection of hotel.

Mo., St. Louis.—Iron Products.—Mid-Nation Iron Products Co. incptd. by Jos. F. Lindsay, E. Abby Lindsay, Frank J. Quinn and others.

Mo., St. Louis.—Engineering.—R. C. Stone Engineering Co., capital \$20,000, incptd. by Richard C. Stone and Kathryn B. Stone of St. Louis and Chas. E. Roop of Springfield, Mo.

N. C., Gastonia.—Electrical.—Michael & Bivens, capital \$25,000, incptd. by J. P. Bivens, F. C. Michael and J. R. Withers.

Okla., Sapulpa.—Construction.—Creek Construction Co., capital \$10,000, incptd. by Geo. E. Kadine, L. O. Lytle and Sam T. Allen.

Okla., Tulsa.—Waste Disposal.—City will construct waste-disposal plant; work to include erection of office and plant structures and installation of machinery, etc.; bids until Feb. 15; Frank Newkirk, City Auditor. (See Machinery Wanted—Waste-Disposal Plant.)

S. C., Charleston.—Publishing.—American Publishing Co. increased capital from \$50,000 to \$100,000.

S. C., Chesterfield.—Live Stock.—Chesterfield Live Stock Co., capital \$5000, incptd. by J. H. Culbertson, D. P. Douglass and W. J. Davidson.

Tenn., Knoxville.—Construction.—Knox Construction Co. increased capital from \$20,000 to \$30,000.

Tenn., Knoxville.—Railway Supplies.—Federal Railway Supply Co., capital \$25,000, incptd. by W. Lyon White, D. H. Jenkins, Robt. S. Young and others.

Tex., Fort Worth.—Garbage Incinerator.—City is considering installation of garbage incinerator with daily capacity 50 tons garbage; cost \$8000 to \$10,000; F. J. Von Zuben, City Engr.

Tex., Midland.—Cattle.—Hutt Cattle Co., capital \$150,000, incptd. by D. L. Hutt of Midland, W. L. Hutt of Fort Worth, and J. E. Hutt of Kansas City, Mo.

Tex., New Braunfels.—Grain Elevator.—H. Dittlinger Roller Mills Co. will build grain elevator to cost \$50,000.

Va., Fredericksburg.—Grain Elevator.—Henry Warden is reported to build grain elevator.

Va., Petersburg.—Hardware.—Joyner Hardware Co., capital \$25,000, incptd.; J. Y. Joyner, Pres.; C. L. Bonjania, Secy.

Va., Richmond.—Construction.—American Construction Corp., capital \$15,000, chartered; Max E. Ruehrmund, Pres.; Franklin D. Robins, Secy.-Treas.

W. Va., Fairmont.—Greater Fairmont Investment Co. will increase capital from \$1,500,000 to \$3,000,000; plans additional land developments in connection with establish-

ment of industrial enterprises; Sanderson & Porter, Engrs., New York.

W. Va., Morgantown—Contracting.—H. C. Gilmore Co., capital \$20,000, inctpd. by H. C. Gilmore, R. E. Kerr, J. E. Mattingly and others.

MISCELLANEOUS FACTORIES

Ala., Anniston—Candy.—L. H. Rivers Candy Co. increased capital to \$8000 and will enlarge plant.

Ala., Birmingham—Candy.—Imperial Candy Co. increased capital from \$5000 to \$10,000.

Ala., Birmingham—Chemicals.—Novol Chemical Co., capital \$10,000, inctpd.; O. C. Maner, Prest.; W. M. Davidson, Secy.-Treas.; both of Birmingham; J. B. Phillips, V.-P., Atlanta, Ga.

Ala., Grand Bay—Medicine.—Rife Kidney Cure Mfg. Co. inctpd.; L. J. Watkins, Prest. and Gen. Mgr.; Blanche Belknap, Secy.-Treas.

Ark., Argenta—Brooms.—E. Covine of Chicago, Ill., is considering establishment of broom factory.

Ark., Forrest City—Creamery.—Forrest City Ice & Coal Co. contemplates erecting creamery.

Ark., Texarkana—Soda Water.—Geo. M. Webb is reported to establish soda-water factory.

Fla., Jacksonville—Coca Cola.—Coca Cola Co. let contract to H. P. McAden, 1555 Hubbard St., Jacksonville, to erect 50x105-ft. brick building with gravel roof and cement floors; cost \$10,000; hand-power elevator; R. A. Benjamin, Archt.

Ga., Columbus—Boll-weevil Destroyer.—Nall Boll-Weevil Eradicator Co. of Georgia, authorized capital \$100,000, inctpd. by A. J. O'Halloran and others to manufacture devices to destroy boll-weevil.

Ky., Louisville—Cereals.—Acme-Jones Co., capital \$30,000, inctpd. by Edgar H. Evans, J. H. Jones and W. J. Gathof.

La., New Orleans—Medicine.—Habbard Medical Mfg. Co., capital \$5000, inctpd.; Sarah Hubbard Thompson, Prest.; Richard Louis Wagner, V.-P.; Louis Albert DeClouet, Secy.-Treas.

La., Spyster—Carbon, etc.—Columbia Carbon Co., Monroe, La., will build plant to manufacture carbon and other products of natural gas; initial investment of \$75,000 to be increased to \$200,000; has 20 carloads of machinery at plant site; contracted with Progressive Oil & Gas Co., Monroe, for 2,000,000 ft. gas daily.

Md., Salisbury—Shirts.—Jackson-Gutman-Lane Co. will rebuild, on enlarged scale, shirt factory reported burned at loss of \$140,000 to \$160,000.

Miss., Hattiesburg—Creamery.—Hattiesburg Creamery Co. will erect creamery; Firm Lumber Co., Contr.

Mo., Springfield.—D. M. Oberman Mfg. Co., Water and Booneville Sts., is having plans prepared by J. L. Heckenlively, Woodruff Bldg., for factory building; 60x120 ft.; 4 stories; equipment to include steam-heating plant, electric generator, electric elevator, automatic sprinkler, etc.; cost of building, \$60,000; cost of equipment, \$40,000.

Mo., St. Louis—Glue.—Mathison Glue Co., capital \$5000, inctpd. by G. M. Morgan, C. E. Henneghan and E. L. Clench.

Mo., St. Louis—Bakery.—Conrad F. Pralle purchased site with depth of 250 ft. on which to build bakery to cost \$50,000.

Mo., St. Louis—Ink Fountains.—Point-Set Multi-Color Fountain Mfg. Co., capital \$2000, inctpd. by S. T. G. Smith, G. A. Stamm, W. R. Schneider and others.

Mo., St. Louis—Macaroni.—American Macaroni Co., 8th St. and Cass Ave., will build plant; has site with frontages of 230 ft. and 162 ft.

Okla., Oklahoma City—Candy.—Sifers Candy Co., capital \$200,000, inctpd. by J. H. Sifers, L. J. Sifers and J. S. Sifers.

Okla., Oklahoma City—Carbon.—Walter O'Bannon, 1113½ N. Harvey St., may install plant to manufacture carbon by burning natural gas. (See Machinery Wanted—Carbon Machinery.)

Okla., Tulsa—Bakery.—Midwest Bakery will erect bakery; 3 stories; concrete and steel; cost \$35,000; plans and specifications prepared.

S. C., Charleston—Ice Cream.—Purity Ice Cream & Confectionery Co., capital \$6500, inctpd. by Athanas Tsilropoulou and J. A. Patla.

Tenn., Bristol—Leather Machine Belts.—Dixie Tannery (controlled by Chas. A. Schieren Co., 26 Ferry St., New York) will build plant to manufacture leather machine belts.

Tenn., Chattanooga—Candy.—Brook Candy Co. has let contracts for lately-noted 2-story addition to one of present buildings.

Tenn., Chattanooga—Paint.—Lookout Paint Mfg. Co. will erect plant of standard steel and concrete fireproof construction; capacity to be 15 per cent. greater than that of former plant. (Lately noted to rebuild plant burned at loss of \$100,000.)

Tex., Austin—Cotton-stalk Paper.—M. W. Marsden and R. Daetwyler, both of Philadelphia, Pa., plan organization of company to manufacture paper, explosives, celluloid fiber, rope fiber, etc., from cotton stalks; locate first plant (on water-power site) in central Texas; daily capacity 40 tons stalks; build other plants in cotton-growing States.

Tex., Dallas—Beds and Cots.—Daltex Spring Bed Co., 2824 Medill St., let contract to E. P. Yates, Sumpter Bldg., Dallas, to construct mill-construction brick building to cost \$20,000; 30,000 sq. ft.; plans by E. P. Yates, Jr., Sumpter Bldg.; has purchased machinery, cost \$12,500; manufacture spring beds and cots, 550 daily; Lyle Marshall, Prest.-Mgr.; H. R. White, Secy.

Tex., Fort Worth—Women's Apparel.—Stripling-Jenkins Co. has plans for factory; 3 stories and basement; 50x162 ft.; reinforced concrete; 24,000 sq. ft. floor space; steam heat; cost \$25,000.

Tex., Italy—Bottling.—Italy Bottling Works, capital \$5000, inctpd. by Whit George, W. K. McCullough and Roy Wimberley.

Tex., Longview—Bottling.—Co-Cola Bottling Co., capital \$10,000, inctpd. by C. M. Prall, J. G. Martin and J. D. Martin.

Tex., Port Lavaca—Barrel Racks.—D. F. Morgan of Victoria, Tex., contemplates organizing company to manufacture barrel racks.

Tex., Sherman—Implements.—J. R. Cole Implement Co., capital \$10,000, inctpd. by R. A. Cole, Julia D. Cole and J. H. Wood.

Tex., Wichita Falls—Creamery.—Holliday Creamery Co., D. J. Caruthers, Mgr., will erect creamery and ice-cream plant; 25x70 ft.; 1 story; brick; cold-storage room adjoining; solid concrete floor; cold-storage room to be lined with 6-in. cork wood; automatic doors; install 12-ton refrigerating plant; cost of building, \$5000; cost of equipment, \$2000.

Va., Petersburg—Cigarettes.—British-American Tobacco Co. (main office, 200 Fifth Ave., New York) is reported to build \$50,000 addition to cigarette factory.

Va., Richmond.—Bain Mfg. Co., capital \$50,000, inctpd.; S. F. Garrett, Prest.; S. M. Atkinson, Secy.-Treas.

Va., Staunton—Boats.—Lankford Boat Corp., capital \$25,000, chartered; R. E. Duval (Mgr. R. E. Duval Co., Munsey Bldg.), Prest., Washington, D. C.; Cecil Hufty, Secy.-Treas., Alexandria, Va.

Va., Yorktown—Chemicals.—Old Dominion Chemical Co., capital \$275,000, inctpd.; Andrew D. Christian, Prest.; E. S. Bolen, Secy.-Treas.; both of Richmond, Va.

W. Va., Moundsville—Shirts.—I. Gordon & Co. secured Herald Bldg. and will remodel and equip as shirt factory.

W. Va., Wheeling—Paint.—Schenerelein & Pratt Co., capital \$3000, inctpd. by E. W. Pratt, Harvey P. Schenerelein, John E. McAdams and others.

W. Va., Wheeling—Matches, etc.—Wheeling Chemical Products Co., 31st and Jacob Sts., advises Manufacturers Record: Plant will have daily capacity 40,000,000 matches, 1500 lbs. glue, 1000 lbs. paste and 1000 lbs. nitrated products; building own machinery; A. A. Schramm, Prest.; H. C. Kalbeter, V.-P.; E. S. Romine, Secy.; O. V. Snyder, Mgr. (Noted in June and April as organized, capital \$300,000, and to occupy Uneeda Brewing Co. building; also lately mentioned.)

MOTOR CARS, GARAGES, TIRES, ETC.

Ala., Birmingham—Automobiles.—Anderson Motor Sales Co., capital \$10,000, inctpd. by J. A. Carr, S. S. Carr, A. S. Carr and M. B. Carr.

D. C., Washington—Garage.—Chas. Sonne will erect garage at 2525 Sherman Ave.; brick; cost \$24,000; B. F. Meyers, Archt., Bond Bldg., Washington; Melton Construction Co., Contr., Washington.

Fla., Lake Worth—Garage.—Public Garage, I. O. Percfield, Prop., will occupy lately-noted building; T. C. Gelhaar, 539 12th St., Milwaukee, Wis., owner, let building contract to Geo. Mather, Lake Worth; Public Garage will install machine shop and garage equipment.

La., Shreveport—Garage.—Wilson Oil & Fuel Co. let contract Garson Bros. to erect

garage and filling station; 2 stories and basement; brick; 80x137 ft.; fireproof; basement for storage room with capacity of 200 machines; supply and filling stations, repair department, etc., on first floor; hydraulic system of filling; 16-ft. driveway; cost \$25,000 to \$30,000; plans by Chas. W. Owens of Shreveport.

Mo., Macon—Automobiles.—Reichel Motor Co., capital \$40,000, inctpd. by Theo. Reichel, John W. Hatton and D. W. Acuff.

Mo., St. Louis—Automobile Locks.—Combination Auto Lock Co., capital \$10,000, inctpd. by W. B. Balthaser, Geo. A. Abel and H. F. Fousling.

Mo., St. Louis—Automobiles.—Al-Bach Automobile Accessories Co., capital \$2000, inctpd. by Frank V. Alden, P. L. and Drucilla Humbach.

N. C., Charlotte—Garage.—Isaac Harde-man will erect garage and automobile salesroom; cost \$10,000.

N. C., Charlotte—Garage.—Thaddeus A. Adams will erect garage to cost \$7500.

N. C., Greensboro—Automobiles.—North Carolina Motor Co., capital \$25,000, inctpd. by J. S. Moon, E. S. Taylor and Joseph Taylor, Jr.

Okla., Sapulpa—Automobiles.—Sapulpa Automobile Sales Co. inctpd. by P. J. Leonard, C. W. Tolliver and W. D. Richardson.

S. C., Clinton—Automobiles.—Adair-Barrow Co., capital \$5000, inctpd. by S. Y. Adair and L. A. Barrow.

S. C., Columbia—Automobile Lights.—Brighter Light Mfg. Co. inctpd. by Henry Berry, Jr., and A. M. Lynch.

S. C., Sumter—Garage.—Shaw Motor Co. contemplates building automobile repair shop.

Tenn., Knoxville—Automobiles.—Burke-Court Motor Co., capital \$30,000, inctpd. by W. B. Burke, W. H. Court, John H. Boston and others.

Tenn., Memphis—Automobiles.—National Motor Car Co., capital \$5000, inctpd. by A. S. Lewis, Carl W. Stewart, F. D. Omberg and others.

Tex., Dallas—Automobiles.—Wichita Motor Truck Co. of Wichita Falls, Tex., will occupy automobile display and salesrooms to be erected by J. Purvin; structure will be 50x100 ft.

Tex., Fort Worth—Garage.—R. E. Harding and Joe Reynolds will build garage; 1 story; 75x200 ft.; brick; Gilmartin & Hodge, Contrs., Fort Worth.

Va., Chilhowie—Automobiles.—Tazewell Motor Co., capital \$15,000, inctpd.; Jas. D. Tate, Prest.; Q. A. Eller, Secy.

Va., Norfolk—Garage.—Pittsylvania Corp. has plans by Neff & Thompson, Norfolk, for garage; brick and concrete; 3 stories; 50x100 ft.; bids to be opened Jan. 31.

Va., Norfolk—Garages.—S. Friedberg, 208-10 Pratt St., Baltimore, has plans by Neff & Thompson, Seaboard Bank Bldg., Norfolk, for building to contain 7 stores; 183x100 ft.; fireproof; brick and concrete; tile floors; tar and gravel roof; steam heat; plate-glass front; 1-story; constructed to permit erection of 2 additional stories; cost about \$40,000; open bids Feb. 7.

W. Va., Clarksburg—Automobiles.—Elgen Motor Service Co., capital \$5000, inctpd. by T. W. Horner, P. M. Harrison, H. K. Carpenter and others.

W. Va., Glen Jean—Garage.—Glen Jean Garage Co., capital \$5000, inctpd. by M. C. Trevis, L. C. Essex, W. O. Trevis and others.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ark., Argenta.—St. Louis, Iron Mountain & Southern Ry., E. A. Hadley, Ch. Engr., St. Louis, is reported to erect car-building plant at Argenta shops, to include foundry to cast all parts used in constructing box cars; reported cost of building \$100,000 and of equipment \$200,000.

Ark., Argenta—Freight Car Equipment.—St. Louis, Iron Mountain & Southern Ry., E. A. Hadley, Ch. Engr., St. Louis, Mo., will increase facilities at Argenta shops, to include manufacture of freight car equipment in addition to general repair work.

La., Westwego.—Trans-Mississippi Terminal, J. A. Shepherd, Prest. and Gen. Mgr., New Orleans, is reported to build train and classification yard at Westwego, to cost \$250,000; will remove shops and roundhouse, now located at Goulsboro, and reconstruct at new yard; roundhouse to have 15 stalls; also contemplates erection of warehouse on New Orleans side of river.

Md., Port Covington.—Western-Maryland

Ry., H. R. Pratt, Ch. Engr., Baltimore, is reported as having plans prepared for roundhouse and turntable.

W. Va., Huntington.—Chesapeake & Ohio Ry., will not build shops; F. I. Cabell, Ch. Engr., Richmond, Va., writes to Manufacturers Record: This company not contemplating constructing Huntington shops at this time. (Lately reported.)

ROAD AND STREET WORK

Ala., Alexander City.—City will pave streets in business section; T. C. Russell, Mayor.

Ala., Selma.—City will pave and curb Selma Ave.; also probably improve Board St. Address The Mayor.

Ala., Sylacauga.—City will pave Broadway. Address The Mayor.

Fla., Cocoa.—City will construct hard-surfaced pavements and drains on certain streets; bids until Jan. 29; C. M. Rogers, Engr., Cocoa and Daytona, Fla.; A. L. Bruner, City Clerk. (See Machinery Wanted—Paving.)

Fla., Jacksonville.—City will pave sections of Forsyth St.; 18,746 sq. yds. bitulithic pavement on concrete base and 1514 sq. yds. vitrified block gutter on concrete base; Committee on Public Works, Gustav Muller, Chrmn., receives bids until Feb. 28; L. D. Smoot, Commr. of Public Works. (See Machinery Wanted—Paving.)

Fla., Fort Pierce.—Indian River Sales Co. let contract Boulevard Development Co. to construct 21 mi. of road; 7 mi. to be hard-surfaced.

Fla., Lakeland.—City let contract Alabama Paving Co. of Birmingham at \$176,475 to pave 138,000 sq. yds. with asphalt-concrete, clay base; J. W. Turner, Engr., Lakeland. (Lately noted inviting bids.)

Fla., Mayo.—Lafayette County voted \$250,000 bonds to construct roads and bridges. Address County Commrs.

Fla., Tarpon Springs.—City voted \$7500 bonds to improve streets and parkways. Address The Mayor. (Noted in Dec.)

Ky., Albany.—Clinton County Commrs. contemplate constructing 13-mi. road from Albany to Wayne County line.

Ky., Albany.—Clinton County will construct following roads: From Albany to Wayne County line, 11.23 mi., water-bound macadam surface; from Albany to Snow, 4.13 mi., 2 mi. water-bound macadam surface; from Albany to Tennessee line, 6.61 mi., grading only; approximate quantities: Earth excavation, 80,000 cu. yds.; rock excavation, 10,000 cu. yds.; concrete, 700 cu. yds.; macadam, 17,000 cu. yds.; bids until Feb. 9; separate bids on concrete; J. G. Sloan, Clerk County Court. (See Machinery—Road Construction.)

Ky., Columbia.—City will improve streets; bids until Feb. 8; cost \$30,000. Address The Mayor.

Ky., Georgetown.—City will improve streets; bids until Feb. 12; cost \$100,000. Address The Mayor.

Ky., Incz.—City will improve streets; bids until Feb. 6; cost \$20,000. Address The Mayor.

Ky., Jamestown.—Russell County voted \$50,000 bonds to construct roads during 1917. Address County Commrs.

Ky., Monticello.—City contemplates paving streets; cost \$25,000. Address The Mayor.

Ky., Tompkinsville.—City will improve streets; cost \$25,000; bids until Feb. 23; also construct 12 mi. road around city; bids until March 2. Address The Mayor.

Ky., Whitley City.—City will pave streets; cost \$30,000. Address The Mayor.

Md., Baltimore.—City let following contracts to repair smooth streets during 1917: Baltimore Asphalt Block & Tile Co., Monroe and Lorman Sts., at \$107,375, sheet asphalt and bituminous paving; Westport Paving Brick Co., Westport, Md., vitrified brick; Hudson Cement & Supply Co., Cold Spring Lane and M. & P. R. R., wood block.

Md., Baltimore.—City will grade and pave with cement concrete alleys as listed in Private Alley Contracts Nos. 20, 21, 22, 23 and 24; bids until Feb. 7; R. M. Cooksey, Highway Engr. (See Machinery Wanted—Paving.)

Md., Baltimore.—Maryland State Roads Com., 601 Garrett Bldg., Baltimore, asks bids until Feb. 13 to construct 3.40 mi. concrete or oil-bound macadam roads in Cecil County and 5 mi. same construction in Frederick County; also bridges at Ocean City, Worcester County, and at Georgetown, Cecil County. (See Bridges, Culverts, Viaducts. See Machinery Wanted—Road and Bridge Construction.)

Mo., Ellicott City.—State Roads Com., Garrett Bldg., Baltimore, let contract Maryland Amiesite Stone Co., 15 E. Fayette St., Baltimore, at \$61,296.30 to construct 4-mi. amiesite road in Howard County.

Miss., Brandon.—Rankin County will vote on bonds to construct 35 mi. of Mississippi Travelers Highway through county.

Miss., Lexington.—Holmes County Supervisors, J. H. Fuqua, Clerk, authorized formation of Road Dist. No. 3 and issuance of \$25,000 bonds to construct roads.

N. C., Abbeville.—City contemplates constructing 30,000 sq. yds. concrete paving, 25,000 sq. yds. of asphalt concrete (Topeka specifications) and 9000 sq. yds. sheet asphalt or brick paving; B. M. Lee, City Engr.

N. C., Goldsboro.—Wayne County, Nahunta Township, voted \$50,000 bonds and Great Swamp Township \$40,000 bonds to construct roads. Address County Comms.

N. C., Lenoir.—City, E. F. Allan, City Clerk, will construct streets and walks; about \$150,000 available; date of opening bids not set.

N. C., Westworth.—Rockingham County Comms., R. E. Wall, Chrmn., let contract to J. T. Platt, reensboro, N. C., to construct 100 mi. top soil roads; issued \$20,000 bonds; W. B. Trogden, Jr., Engr., Greensboro. (Noted in Dec.)

S. C., Clinton.—City will construct several miles cement sidewalks; S. W. Sumner, City Clerk. (See Machinery Wanted—Paving Materials.)

S. C., Clover.—City let contract to A. H. Gulon & Co., Ragan Bldg., East Main Ave., Gastonia, N. C., to lay about 1000 sq. yds. sidewalk.

S. C., Clover.—Smith Bros. let contract A. B. Guran Co. of Gastonia, N. C., to cement sidewalks in front of block of store buildings on Main St.

Tenn., Mountain City.—Johnson County votes March 1 on \$200,000 bonds to improve roads. Address County Comms.

Tenn., Murfreesboro.—City, G. B. Giltner, Mayor, let contract to West Construction Co., Chattanooga, Tenn., to construct 22,900 sq. yds. paving, also curb and gutter; paving price \$29,341; concrete \$922.50; G. B. Howard, Nashville, Tenn., Engr. (Bids lately noted.)

S. C., St. Matthews.—City contemplates paving streets in business section. Address The Mayor.

Tex., Amarillo.—City votes Feb. 15 on \$50,000 bonds to pave streets. Address The Mayor.

Tex., Corpus Christi.—City contemplates paving Leopard St.; City Engr. Stevens has reported estimates to City Council. Address The Mayor.

Tex., Houston.—Harris County contract, lately noted let to Burkey Transportation Co. (not Transfer Co.) calls for resurfacing shell road with gravel; cost \$10,000.

Tex., Roby.—Fisher County votes Feb. 17 on \$100,000 bonds to construct roads. Address County Comms.

Tex., Houston.—City let contract Horton & Horton of Houston at \$49,200 to pave Harrisburg Blvd. from end of present pavement to Yoakum St. with Uvalde rock asphalt; Ben Campbell, Mayor. (Lately noted inviting bids.)

Tex., Snyder.—City will expend \$60,000 to construct paving noted in Dec.; Engr., Henry E. Elrod, Dallas, Tex.

Va., Richmond.—City invites bids until Feb. 16 to pave several alleys; Chas. E. Bolling, City Engr.

W. Va., Buckhannon.—Upshur County, Buckhannon Dist., votes Feb. 23 on \$245,000 bonds to construct roads. Address County Comms.

W. Va., Parkersburg.—City will pave Market, Juliana, Depot, Twelfth and Washington Sts.; vitrified brick, cement filler, concrete base.

W. Va., Philippi.—Barbour County, S. F. Hoffman, County Clerk, will construct about 18.7 mi. macadam road and 12 concrete bridges in Barker Dist.; bids until Feb. 20. (See Machinery Wanted—Road Construction.)

SEWER CONSTRUCTION

Ark., Earle.—City is having plans prepared by United States Sanitary Septic Tank Co., Memphis, Tenn., for sewer system; tile pipe, H. C. Crum, City Recorder. (Lately noted.)

Fla., Tarpon Springs.—City voted \$15,000 bonds to extend sewer system. Address The Mayor. (Noted in Dec.)

Ky., Jackson.—City contemplates constructing sewer system. Address The Mayor.

La., Lafayette.—City voted to levy tax to construct sewer system; cost \$90,000. Address The Mayor. (Noted in Nov.)

Miss., Leland.—City engaged Frank L. Wilcox of St. Louis, Mo., to make surveys for sewer system.

Okla., Carnegie.—City voted \$22,000 bonds to construct lately-noted sanitary sewers and sewage-disposal plant; will ask construction bids; Benham Engineering Co., Oklahoma City, Engr.

Okla., Tulsa.—City will construct sanitary sewers, including laterals, connections, etc. in Sewer Dist. No. 116; bids at office of City Auditor until Feb. 1; H. H. Wyss, City Engr. (See Machinery Wanted—Sewer Construction.)

N. C., Winston-Salem.—City votes March 27 on \$175,000 bonds to extend sewer system. Address The Mayor.

Tenn., Nashville.—City Comms. let contract J. T. Lewis of Nashville at \$2190 to construct clay pipe sewer in alley between 11th and 12th Aves. from Cockrill St. trunk sewer southwardly to Scovel St.

Tex., Longview.—City is having plans prepared by H. N. Roberts, City Engr., for sewage-disposal plant.

TELEPHONE SYSTEMS

Okla., Enid.—Antelope Flat Telephone Co. inceptd. by D. E. Stahl, J. D. Houston and L. J. Randolph.

Tex., Dallas.—Dallas Automatic Telephone Co. contemplates expenditure of \$1,000,000 to \$2,000,000 for improvements and extensions.

TEXTILE MILLS

Ala., Birmingham.—Hosiery.—Buster Brown Hosiery Mills, Chattanooga, Tenn., will establish branch mill; has building; daily capacity 2000 doz. misses' hose.

Ky., Louisville.—Woolen Cloth.—Superior Woolen Mills, Parkersburg, W. Va., will increase capital and establish mill; has initial equipment.

N. C., Bladenboro.—Cotton Goods.—Bladenboro Cotton Mills will install additional new machinery.

N. C., Lillington.—Hosiery.—Lillington Hosiery Mills, capital \$10,000, inceptd. by E. T. Spence, T. E. Upchurch and others.

S. C., Chester.—Cotton Cloth.—Baldwin Cotton Mills will add 9000 spindles, 150 looms, 45 cards, etc.; completing picker-room and 64-ft. addition to weave-room; has let all contracts; Fiske-Carter Co. has building contract; J. E. Sircine, Engr.-Archit.; both of Greenville, S. C.

S. C., Greenville.—Cotton Yarns, etc.—McGee Mfg. Co. will install 2000 additional spindles.

S. C., Winnsboro.—Cotton Cloth.—Winnsboro Mills, Henry Everett, Treas., 60 Federal St., Boston, Mass., will increase manufacturing facilities; Mr. Everett writes to Manufacturers Record: Planning to extend in near future; plans not definitely determined. (Previously noted.)

Tenn., Chattanooga.—Hosiery.—Tennessee Textile Mills organized; Clarence E. Keene, Gen. Mgr.; Clifford Friar, Director; purchased and will remodel factory buildings; purchased machinery costing \$30,000; daily capacity 1000 doz. pairs hose. (Noted inceptd. in Jan. with \$100,000 capital.)

Tex., Pittsburgh.—Cotton Yarn.—H. H. Luedicke may establish cotton-yarn mill. (See Machinery Wanted—Cotton Machinery.)

Va., Bonsack.—Blankets.—Bonsack Woolen Mill, R. F. D. No. 1, Roanoke, Va., will add three 330-spindle mules, 16 looms, 3 sets of cards, finishing equipment, etc.; purchased this machinery.

WATER-WORKS

Ark., Batesville.—City contemplates installing water filter. Address The Mayor.

Ark., Springdale.—E. Masoner applied for municipal franchise to construct water-works and electric-light plant.

Fla., Tarpon Springs.—City voted \$15,000 bonds to extend water-works. Address The Mayor. (Lately noted.)

Ga., Norman Park.—Norman Institute let contract for lately-noted water and light plant equipment. (See Electric Plants.)

Ky., Hazel Green.—City votes Feb. 15 on \$40,000 bonds to construct water-works. Address The Mayor.

Ky., Grayson.—Bagby Jewelry Co. contemplates installation of water-works. (See Machinery Wanted—Water-works.)

Ky., Monticello.—City contemplates voting on \$20,000 bonds to construct water-works. Address The Mayor.

Ky., Liberty.—City plans election in March to vote on bonds to construct water-works. Address The Mayor.

La., Lafayette.—City voted to levy tax to extend water system; cost \$30,000. Address The Mayor. (Noted in November.)

Mo., Cumberland.—City is having plans prepared for extension of water-works; Ralph L. Rizer, City Engr.

Miss., Independence.—City let contract Jones Construction Co. of Okolona, Miss., to construct water-works.

N. C., Winston-Salem.—City votes March 27 on \$125,000 bonds to extend water system. Address The Mayor.

Okla., Checotah.—City voted \$125,000 bonds to extend water-works; A. O. Johnson, Mayor. (Lately noted.)

Okla., Tahlequah.—City, R. H. Couch, Mayor, is having plans made for water-works extension; capacity 250,000 gals.; cost \$30,000; E. B. Murray & Co., Engrs., 920 Walnut St., Kansas City, Mo. (Bonds lately noted voted.)

Tex., Rosebud.—City will construct reservoir; invites bids on excavation; address J. R. Taylor. (See Machinery Wanted—Excavation.)

Tex., Panhandle.—City (lately noted contemplating bonds) proposes to install water and electric-light plants; A. L. Henson, Mayor. (See Machinery Wanted—Water-works.)

Tex., Weimar.—City voted \$15,000 bonds to extend and improve water-works. Address The Mayor. (Lately noted to vote.)

Va., Clintwood.—City voted \$30,000 bonds to construct water-works. Address The Mayor.

Va., Coeburn.—City will improve water-works; bids until Feb. 7. Address The Mayor.

W. Va., Benwood.—City is considering construction of water-works. Address The Mayor.

WOODWORKING PLANTS

Ala., Fayette.—J. M. Holliman, Box 587, and others contemplate organization of company to manufacture excelsior and wood wool, spokes and handles. (See Machinery Wanted—Woodworking Machinery.)

Ark., Brinkley.—Heading.—Chas. Duff, Inc., capital \$10,000, inceptd. by Chas. Duff, Julia G. Duff and R. C. Mitchell to manufacture heading.

Ark., Green Forest.—Mission Furniture.—Watts & Buell Furniture Co., H. L. Watts, Jr., Mgr., will establish lately-noted plant to manufacture mission furniture; erect 30x60-ft. 2-story main building and 14x70-ft. 1-story warehouse; cost within \$1500; install equipment, cost about \$2000. (See Machinery Wanted—Woodworking Machinery.)

La., Lake Charles.—Cooperage.—Lake Charles Cooperage Co., capital \$15,000, incorporated; R. Krause, Pres.; C. B. Gates, V.-P.; Frank S. Warren, Secy.-Treas.

Miss., Charleston.—Cooperage.—Charleston Cooperage Co., organized with F. S. Charlott, Pres., St. Louis, Mo.; Walter B. Burke, V.-P., Charleston; purchased site on which to build plant. (Lately noted inceptd. with \$50,000 capital.)

Miss., Corinth.—Heading Machinery.—W. E. Small contemplates installation of heading machinery, drykilns and trucks. (See Machinery Wanted—Heading Machinery, etc.)

Mo., St. Louis.—Veneer.—Christmann Veneer & Lumber Co., capital \$10,000, inceptd. by Wm. E. A. Christmann, F. W. Evers and H. C. Evers.

N. C., Mt. Gilead.—Chairs.—White Oak Chair Co., capital \$25,000, inceptd. by J. A. McAulay, R. E. Andrews, Frank McAulay and others, to establish factory with daily capacity 50 to 75 dozen chairs. (See Machinery Wanted—Chair Machinery.)

N. C., Lumberton.—Sash and Door.—Robt. E. Lee, Farmers & Merchants' Bank Bldg., interested in proposed sash and door factory. (See Machinery Wanted—Woodworking Machinery.)

N. C., Wadesboro.—Excelsior.—F. P. Parson is interested in proposed establishment of excelsior plant. (See Machinery Wanted—Excelsior Machinery.)

N. C., Winston-Salem.—Chairs.—Forsyth Mfg. Co. increased capital from \$50,000 to \$150,000. (Noted in December to have let contract Fogle Bros. Co., Winston-Salem, to erect plant buildings.)

Tenn., Kingsport.—Veneer, etc.—White Oak Veneer & Lumber Co. will erect 34x120-ft. structure with 20x36 and 30x64-ft. eels, also

boiler-room, etc.; no contract; has purchased machinery; manufacture quartered white oak veneers (sawed), flitches, quartered and dimension lumber; H. T. Spencer, Pres. and Mgr.; H. L. Cecil, V.-P. and Treas.; F. A. Jackson, Secy. (Lately noted to build plant.)

FIRE DAMAGE

Ala., Clanton.—Minnie Muse's store and residence; loss \$7000.

Ala., Dothan.—Noah Bell's residence; loss \$4000.

Ala., Gadsden.—Freeman Brothers' store.

Ala., Montgomery.—Dixie Cotton Oil Co.'s main building; loss \$40,000.

Ark., Cabot.—G. E. Waddle's residence; loss \$5000.

Ark., Carthage.—A. J. Womack's store; loss \$6000; M. L. McGraw's store; loss \$2500; P. K. Wylie & Son's residence; loss \$11,000.

Ark., Gravette.—Three business buildings at Grove, owned by Yeargin Bros., Southwest City, Mo.; loss \$5000 to \$10,000.

Fla., Tarpon Springs.—Gulf Pine Lumber Co.'s drykilns; loss \$30,000.

Ga., Douglas.—Tanner-Vickers Bldg., owned by B. H. Tanner and M. F. Brice, loss \$10,000; Fred Brewer's residence, owned by J. C. Brewer, Fitzgerald, Ga.; Geo. A. Tanner's residence, owned by E. L. Vickers.

Ky., Henderson.—A. Waller's grain elevator; loss \$2000.

La., Leesville.—Leesville Bottling Works; building owned by Nona Mills Co. and leased by Aubin Daigle.

Ky., Louisa.—Era Theater, owned by W. D. Blair.

Mo., Hagerstown.—Mrs. Ida Garonzik's store and residence; loss \$4000.

Mo., North East.—Green Hill Fire Brick Co.'s plant.

Mo., Salisbury.—Jackson-Gutman-Lane Co.'s shirt factory; loss \$140,000 to \$160,000.

Mo., Clayton.—Sam C. Davis' hothouses.

Mo., Lathrop.—Alex Loeb's store, loss \$25,000; John Cross, building, loss \$10,000; telephone exchange.

N. C., Burnsville.—Stanley McCormick School, owned by Presbyterian Church; loss \$25,000. Address The Pastor.

N. C., Derita.—John P. Hunter's sawmill.

S. C., Manning.—Eugene Brock's residence; loss \$3000 to \$4000.

S. C., Union.—S. C. Crosby's store and dwelling.

Tenn., Memphis.—Century Grain & Feed Co.'s plant at Aulon, including grain elevator, feed mill, machinery and outbuildings; buildings owned by United States Feed Co., loss \$20,000 to \$25,000; total estimated loss, \$30,000.

Tex., Brownwood.—Third Ward School; loss \$15,000. Address The Mayor.

Tex., Delia.—School building; loss \$3000. Address Dist. School Trustees.

Tex., Gatesville.—Gatesville Power & Light Co.'s plant; loss \$75,000.

Tex., Haskell.—K. D. Simmons' livery stable; loss \$5000.

Tex., Houston.—Magnolia Park Baptist Church; loss \$8000. Address The Pastor.

Tex., Nocona.—Baptist parsonage. Address The Pastor.

Tex., Taylor.—Sturgis-Goldstein Co.'s store; loss \$5000.

Tex., Temple.—Scully House; loss \$3000 to \$4000.

Va., Charlottesville.—Chemical laboratory of University of Virginia; loss \$25,000.

Va., Crimora.—Arthur Keolner's barn; loss \$10,000.

Va., Crewe.—Crewe Roller Mills, loss \$20,000; Crewe Ice Plant, loss \$35,000.

Va., Ferrum.—Walter Stanley's residence near Prillaman Siding; loss about \$3000.

Va., Gordonsville.—Buildings on "Rockland Farm," 2½ mi. from Gordonsville, owned by Thomas Atkinson, Richmond, Va.; loss \$30,000.

Va., Hambleton.—John Phillips' residence.

Va., Mt. Jackson.—J. I. Triplett's flour mill and grain elevator.

W. Va., Ward.—Kelleys Creek Colliery Co.'s electric power plant; loss \$2500.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—James L. Karrick, 1420 U St. N. W., has plans by Gregg & Leisenring, 1320 New York Ave., Washington, for apartment-house at 1817 G St. N. W.; 90x165 ft.; 80 ft. high; reinforced concrete; slag roof; reinforced concrete floors; Hutchison vapor-heating system; electric lights; 2 electric elevators; cost \$150,000; construction by owner, who may be addressed. (Lately noted.)

D. C., Washington.—Fulton R. Gordon is having plans prepared by M. G. Lepley, 1406 G St. N. W., Washington, for apartment-house; 6 stories; brick, concrete and stone; tile and marble finish; cost \$100,000.

Fla., Miami.—David Afremow will erect apartment-house; 2 stories; 23 two-room suites; sleeping porches.

Md., Baltimore.—Ashburton Apartment Co., Percy W. Elmer, Secy.-Treas., 533 Title Bldg., is having plans prepared by George R. Morris, same address, for unit to Ashburton Apartments; 42x180 ft.; Colonial type; 3 stories; cost \$30,000.

Md., Baltimore.—Tuscan Apartment House Co. is having plans prepared by Clyde N. Friz, 1523 Munsey Bldg., Baltimore, for Tuscan apartment-house at 40th St. and Stony Run Lane; North Italian type; 40x180 ft.; brick; tile roof; balustrade terrace; estimated cost \$100,000.

Mo., Kansas City.—C. E. Karr will erect 2-story 4-apartment brick flat; cost \$8000.

Mo., Kansas City.—Chas. T. J. Miner, 3808 Garfield St., will erect 2 apartment-houses at 27th and Harrison Sts.; brick; 3 stories; 25x45 ft.; vulcanite roof; subfloor and oak top floor; city lighting; cost \$12,000; steam heat, \$955; plans and construction by owner. (Lately noted.)

Mo., Kansas City.—Corbin Building Co. will erect apartment-house at 4205-07 Harrison St.; 3 stories; 6 apartments; cost \$9000.

Mo., Kansas City.—H. K. Given Building Co. will erect 3-story 12-apartment brick flat; cost \$25,000.

N. C., Charlotte.—Brown & Co., Willis Brown, Prest., will erect 8 tenements; cost \$40,000.

Tex., Dallas.—Cobb & Crofford Co. will erect 40-room tile apartment-house; cost \$40,000.

Tex., El Paso.—L. F. and Stafford Campbell, El Paso; Mrs. Alfred Aloe, Brownsville, Tex., and others are reported to erect \$150,000 apartment and store building.

Va., Richmond.—B. L. Roden will erect brick apartment-house; cost \$3000.

Va., Richmond.—J. D. Carneal will erect four 2-story brick flats on Harrison St.; cost \$8000.

ASSOCIATION AND FRATERNAL

Ala., Mobile.—A. F. & A. M. will erect school building; also remodel Masonic Home for additional dormitory.

Fla., Daytona.—Daytona Lodge No. 1216, Loyal Order of Moose, will erect \$15,000 structure.

Fla., Vero.—Woodmen of the World plan to erect store and lodge building; 2 stories.

Ga., Atlanta.—Fulton Bag & Cotton Mills plans to erect Y. M. C. A. building and athletic field; latter 400 ft. sq., with baseball diamond, track, etc.; initial cost \$50,000.

Ky., Lexington.—Chesapeake & Ohio Ry. will expend \$5000 to remodel Copland residence for Railroad Y. M. C. A., F. W. Collier, Acting Secy.; capacity 150 to 200 members.

Miss., Hattiesburg.—Y. M. C. A. plans to complete building at cost of \$24,000; B. D. Moore, Chrmn. Com.

Mo., St. Louis.—Negro Y. M. C. A. will erect building at Ewing Ave. and Pine St.; 150 dormitory rooms, assembly hall, gymnasium, swimming pool, etc.; 5 stories; brick; cost \$150,000; Albert B. Groves, Archt., 314 N. Fourth St., St. Louis, may be addressed; construction begins April 1. (Lately noted.)

N. C., Durham.—B. P. O. E. will erect lodge building.

Tenn., Knoxville.—William McKinley Council, Jr. O. U. A. M., plans to erect \$15,000 to \$20,000 structure; brick; 50x150 ft.; 2 stories and basement; lower floor for stores.

Tex., Cleburne.—Order of the Eastern Star will erect home for aged Masons.

Tex., Kingsville.—Chamberlain Masonic Bldg. Assn. has plans by Jul Leffand, Victoria, Tex., for additional story to building; 50x80 ft.; tile and brick; Barrett specification roof; wood floors; cost \$10,000 to \$12,000. Address E. W. House, Kingsville. (Lately noted.)

Tex., Navasota.—A. F. & A. M. will erect Masonic temple; 3 stories; fireproof; store-room on first floor; offices second; lodge-room third.

BANK AND OFFICE

Ala., Mobile.—W. M. Marshall is reported to erect office building.

D. C., Washington.—Central Savings Bank has plans by W. S. Plager, 1930 Kearney St. N. E., Washington, for bank and hall at 7th and I Sts. N. W.; 24.1x75 ft.; semi-fireproof; slag roof; hollow tile and cement floors; steam heat; gas and electric lights; cost \$25,000. Address architect. (Lately noted.)

D. C., Washington.—Commercial National Bank, 14th and G Sts., has plans by Waddy B. Wood, 816 Connecticut Ave. N. W., Washington, for bank building at present site; 11 stories; 75x100 ft.; lower floor for banking quarters; upper floor, offices. (Lately noted.)

N. C., Charlotte.—American Trust Co. will expend \$10,000 to remodel building, to include refurnishing and decorating interior with Vermont marble; plans and construction in charge of Warrington G. Lawrence, 225 5th Ave., New York.

N. C., Greensboro.—L. M. Ham will erect store and office building. (See Stores.)

N. C., Roxboro.—People's Bank, A. R. Foushee, Prest., will expend \$5000 for improvements to building, to include vaults, fixtures, rearrange interior, ladies' restroom, heating system, etc.

N. C., Winston-Salem.—Leak-Cobb Co. will erect store building to contain offices. (See Stores.)

Okla., Tulsa.—Dr. Walter E. Wright will erect office building and theater on W. 3d St.; theater entrance through lobby of office building; Dr. Wright wires Manufacturers Record: "Office building 8 stories, 100x42 ft.; theater in rear, 110x92 ft.; brick and concrete construction; cost \$250,000; architect not selected."

Tex., Navasota.—A. F. & A. M. will erect Masonic temple to contain offices. (See Association and Fraternal.)

Tex., Wichita Falls.—Nash Hardware Co. is reported to erect warehouse and office building. (See Warehouses.)

CHURCHES

Ala., Coden.—St. Michael's Catholic Church will erect building; about 50x52 ft.; concrete base, wall and pillars; cypress shingle roof; heart pine floors on tarred sills and joists; cost \$3000; plans and construction by Rev. T. A. Lenahan, pastor, Bayou Labatre, Ala., who may be addressed.

Ark., Conway.—First Presbyterian Church, Rev. J. William Boyer, Pastor, will erect manse.

Ark., Earle.—Baptist Church will erect brick building; cost \$10,000. Address The Pastor.

D. C., Washington.—Holy Trinity Church is having plans prepared by F. G. Pierson, Washington Loan & Trust Bldg., Washington, for 2-story building; reported cost \$150,000.

D. C., Washington.—Greek Church is having plans prepared by N. R. Grimm, Bond Bldg., Washington, for building at 8th and I Sts. N. W.; 2 stories; brick and stone; electric lights.

Fla., Tarpon Springs.—Greek Church will erect cathedral; Byzantine Empire style; interior decorations to cost \$50,000. Address The Pastor.

Ga., Albany.—Presbyterian Church will erect building; pressed brick and stone; tile roof; cost \$30,000. Address The Pastor.

Ga., Atlanta.—Druid Hills Presbyterian Church, Rev. D. K. McIver, pastor, plans to erect building to replace present structure.

Ga., Augusta.—Baptist Tabernacle Church, Rev. R. E. Neighbour, pastor, will erect building; 80x85 ft.; seating capacity 1200.

Ga., Hawkinsville.—Baptist Church plans to erect \$20,000 building. Address The Pastor.

Ga., Valdosta.—Baptist Tabernacle has

plans by Lloyd Greer, Valdosta, for remodeling building; cost \$6000.

Ky., Livermore.—Baptist Church will erect building; Dr. H. J. Beard, Chrmn. Building Com.

Md., Chevy Chase.—All Saints' Church has plans by Geo. P. Hales, 3904 Ingomar St. N. W., Washington, D. C., for rectory; 2½ stories; stone and frame; cost \$9500; Rev. J. W. Austin, rector; Archt. is taking bids.

Miss., Clarksdale.—Presbyterian Church will erect building; cost \$25,000; Chas. O. Pfeil, Archt., Clarksdale.

Miss., Meridian.—Fifteenth Avenue Baptist Church, Rev. E. D. Solomon, Pastor, receives bids Feb. 11 to erect building; pressed brick; porch supported by 4 Ionic columns; basement to contain Sunday-school, 54x60 ft., of 14 classrooms for primary department, kitchen, dining-room, fireproof fuel and boiler-room; main auditorium, 60x60 ft., with seating capacity 1000; gallery to seat 200; 8 classrooms, library, choirroom, etc., on second floor; Philathea room, Baraca room and 10 classrooms on third floor; cost \$25,000 to \$30,000; R. H. Hunt, Archt., Chattanooga, Tenn. (Lately noted.)

Miss., Sturgis.—Baptist Church, Rev. N. B. Wallace, Pastor, opens bids Feb. 10 to erect building; 60x36 ft.; brick basement and frame superstructure; shingle, wood or metal roof; concrete basement floor, others wood; electric lighting; stoves; plans by Dr. G. F. Roberts, Sturgis. Address the pastor or architect. (See Machinery Wanted—Church Furnishings; Seating.)

N. C., Lenoir.—First Methodist Church opens bids Feb. 20 to erect building; 2 stories and basement; brick; slate roof; cost \$15,000; steam heat, \$500; indirect lighting, \$400; construction begins Feb. 15; Chas. W. Carlton, Archt., Chattanooga, Tenn. Address D. M. Litaker, Chrmn., Lenoir. (Lately noted.)

N. C., Pineville.—Presbyterian Church will erect building; brick. Address The Pastor.

Okla., Rush Springs.—Cumberland Presbyterian Church will erect building in Little Rush Dist., 7 mi. northwest of Rush Springs; Rev. J. E. Bell, pastor.

Okla., Tulsa.—Christian Church will erect building; 100x140 ft.; steam heat; electric lights; other details not decided; cost \$4000; architect not selected. Address J. W. Darby, 322 S. Wogales St., Tulsa. (Lately noted.)

S. C., Clover.—Presbyterian Church will erect church. Address The Pastor.

Tex., Lewisville.—J. A. Hatcher, Clerk of Session, is receiving bids to erect church to cost \$8000 to \$8500.

Tex., Quanah.—Methodist Church will erect \$20,000 structure; brick. Address The Pastor.

Va., Coeburn.—Baptist Church is having plans prepared by C. B. Kearfott, Bristol, Tenn., for \$10,000 structure.

Va., Graham.—J. A. Strickland is interested in erection of church; about 40x60 ft.; cost about \$5000; plans incomplete.

W. Va., Beckley.—Christian Church is having plans prepared by A. A. Honeywell, Kokomo, Ind., for building.

W. Va., Huntington.—Methodist Church, Rev. Arthur Lazenby, pastor, care Fifth Avenue Hotel, Huntington, receives bids until Feb. 8 for erection, electric lighting, plumbing and steam heating for lately-noted church and parsonage; plans by M. F. Giesey, Wheeling, W. Va., call for brick, tile and terra-cotta church building; 64x84 ft.; slate roof; wood floors; cost \$25,000. (See Machinery Wanted—Electric Wiring; Plumbing; Heating.)

CITY AND COUNTY

Ark., Texarkana.—City Hall.—City will erect city hall; estimated cost \$60,000. Address The Mayor.

Fla., Homestead.—Town Hall.—Town Council, W. B. Caves, Clerk, receives bids until Feb. 5 to erect town hall; plans and specifications at office Mr. Caves.

Fla., Miami.—Warehouse.—W. B. Moore, City Clerk, receives bids until Feb. 15 for construction of lately-noted transfer warehouse; 55x250 ft.; separate bids for (1) construction of warehouse; (2) construction of creosoted wood block or reinforced concrete floor; (3) furnishing hand-power 15-ton capacity traveling crane; plans and specifications on file at offices of Isham Randolph & Co., Harbor Engrs., as follows: Suite 18 Real Estate Bldg., Miami; Suite 1310 Heard National Bank Bldg., Jacksonville, Fla.; Suite 1827 Continental Bank Bldg., Chicago, and may be secured from Jacksonville office. (See Machinery Wanted—Electric Crane.)

Okla., Durant.—Jail.—Bryant County Com-

missioners receive bids until Feb. 26 to erect courthouse and jail. (See Courthouses.)

Okla., Ardmore.—Convention Hall.—City, O. C. Lasher, Mayor, opens bids Feb. 6 to erect convention hall; 2 stories and basement; 128x85 ft.; seating capacity about 2000; main auditorium with large stage; gallery to seat 800; cost \$50,000; J. B. White, Archt., Ardmore. (Previously noted.)

Tex., Texarkana.—City Hall.—City is reported to erect \$60,000 city hall. Address The Mayor.

COURTHOUSES

La., Monroe.—Ouachita Parish Police Jury, C. W. Phillips, Chrmn., has plans by J. W. Smith, Monroe, for courthouses and jail; 4 stories; cost \$250,000; bids opened Jan. 27. (Lately noted.)

La., Winnfield.—Winn Parish Police Jury will erect courthouse to replace burned structure; 3 stories; fireproof; tile or slate roof; concrete and tile floors; steam heat; interior wiring and fixtures; cost about \$75,000; date opening bids not set. Address A. D. Brice, Prest. Police Jury. (Lately noted.)

Okla., Durant.—Bryant County Commrs., Ed. L. Spears, Chrmn., receive bids until Feb. 26 to erect courthouse and jail, for which \$100,000 bonds have been voted; plans at office County Clerk, Durant; Jewell Hicks, Archt., Durant. (Lately noted.)

DWELLINGS

Ala., Huntsville.—J. J. Bradley will erect \$8000 residence at Merrimack Mills to replace structure damaged by fire.

D. C., Washington.—Harry A. Kite, 1338 G St. N. W., has plans by Landvoigt & Cook, 1410 H St. N. W., Washington, for store at 2602 12th St. N. E.; cost \$3500; also four 2-story brick dwellings 112-18 14th St. S. E.; cost \$12,000; and 7 brick dwellings at 1402-14 Massachusetts Ave. S. E.; cost \$21,000.

D. C., Washington.—Shannon & Luchs have plans by Geo. T. Santmyers, 921½ New York Ave., Washington, for 12 dwellings in 5100 block 13th St. N. W.; cost \$58,000.

Fla., Fort Pierce.—John W. Pinkerton, Toledo, Ohio, is reported to erect 8 or 10 bungalows.

Fla., Jacksonville.—J. W. Bynum will erect 2-story tile-vener residence; cost \$10,000.

Fla., St. Petersburg.—W. P. Hill, Randolph, Neb., is reported to erect residence on 6th St.

Ga., Decatur.—W. A. Ozmer will erect residence.

Ga., Decatur.—P. L. Weekes will erect number of residences.

Ga., Decatur.—W. H. S. Hamilton will erect residences.

Ga., Tifton.—J. J. Golden is having plans prepared by C. V. Arnold, Tifton, for residence; brick veneer; tile baths and veranda floors; hardwood interior finish; slate roof; cost \$5500; also garage to cost \$1000; Mr. Arnold also making plans for several other buildings. Address architect. (See Machinery Wanted—Feldspar; Crushed Granite; Shingles.)

Ga., Tifton.—Max Nathan is having plans prepared by C. V. Arnold, Tifton, for residence; ordinary construction; some rooms paneled with illocusta; hardwood floors; electric lights; frame; brick foundation; slate roof; cost about \$4000. Address architect. (See Machinery Wanted—Feldspar; Crushed Granite; Shingles.)

Ky., Louisville.—Maggie Henn will erect 5 brick cottages; cost \$7000.

Ky., Louisville.—M. P. Hunt will erect brick-veneer dwelling; cost \$3750.

La., New Orleans.—Gonzalo Abauza, Gen. Mgr. Mexican Navigation Co., will erect residence in Audubon Park addition.

Md., Baltimore.—J. P. Brandau & Bros., 700 E. North Ave., is reported to erect 12 two-story brick dwellings on Prestman St. near Monroe St.; 15x45 ft. each; cost \$14,000.

Md., Baltimore.—George Yeatman has plans by E. L. Palmer, Jr., Munsey Bldg., Baltimore, for eight 2½-story brick dwellings on east side Newland Ave.; 23x36 ft.; cost \$35,000.

Md., Baltimore.—Mrs. Mary E. Knell, 215 Linden Ave., will erect 2½-story frame residence on Liberty Heights Ave.

Md., Baltimore.—City Real Estate Co., 11 E. Fayette St., acquired Graffin tract of 10 acres, and is reported to erect several hundred 2-story dwellings; construction by Welsh Construction Co., same address.

Md., Bradley Heights.—Real Estate Trust Co. will erect residence; 2½ stories; frame; shingle roof; 8 rooms and bath; hot-water

heat; electric lights; J. H. De Sibour, Archt., 1603 K. St. N. W., Washington, D. C.

Md., Cumberland.—Cumberland Development Co. is reported to erect number of dwellings for Kelly-Springfield employes; Geo. F. Sansbury, Archt., Cumberland.

Md., Mt. Washington.—Daniel H. Flynn has plans by Clyde N. Friz, 1523 Munsey Bldg., Baltimore for 1½-story frame semi-bungalow on Ridge Rd., Hill Top Park; following contractors are estimating: Cowan Building Co., 106 W. Madison St.; A. Knell, Jr., 215 St. Paul St.; G. Walter Tovell, Eutaw and McCulloch Sts.; Charles W. Brown, Rogers and Narcissus Aves.; C. W. Littleton & Son, 4313 Liberty Heights Ave., and Edward G. Turner, 15 E. Fayette St.; all of Baltimore.

Miss., Clarksdale.—Estes & Williams and others are erecting 10 dwellings to cost \$2500 to \$5000 each; frame, brick veneer and stucco; bungalow style; hot-water and hot-air heat.

Mo., Kansas City.—Gus Agee will erect 2-story frame dwelling; cost \$4000.

Mo., Kansas City.—D. B. Ferguson will erect five 2-story frame dwellings at 3300-08 E. 27th St.; cost \$10,000.

Mo., Kansas City.—J. C. Nichols Investment Co. will erect 5 stucco-veneer dwellings; 2 stories; frame; cost \$38,000.

N. C., Elkin.—E. C. Grier will erect \$3000 residence.

N. C., Elkin.—Geo. Chatham will erect \$7000 residence.

N. C., Elkin.—J. C. Dickerson will erect \$5000 residence.

N. C., Elkin.—R. G. Smith will erect \$10,000 residence.

N. C., Elkin.—M. H. Greenwood will erect \$3000 residence.

N. C., Statesville.—M. T. Barnhart will erect residence.

N. C., Winston-Salem.—Piedmont Investment Co. will erect 10 dwellings in Kimberly Park; bungalow type.

S. C., Greenville.—Dr. J. W. Jervy will erect residence in Cagle Park addition.

Tex., Austin.—Herbert Finch will erect 2-story dwelling; cost \$7720.

S. C., Spartanburg.—R. E. Cudd and others will erect 2 dwellings to cost \$3900.

Tex., Dallas.—M. Lewin will erect 10-room 2-story frame residence; cost \$3500.

Tex., El Paso.—R. E. McKee will erect tenement; cost \$3000.

Tex., El Paso.—Lawrence Funk will erect bungalow; cost \$4000.

Tex., El Paso.—H. T. Ponsford will erect residence; bungalow type; cost \$3300.

Tex., El Paso.—Geo. W. Sharp will erect 3 bungalows; cost \$9000.

Tex., El Paso.—Home Builders will erect bungalow; cost \$3750.

Tex., Pittsburg.—G. A. Hess will erect 2-story residence to replace structure lately noted damaged by fire; frame or brick veneer; shingle roof; pine floors; cost \$3500.

Tex., San Antonio.—Craig J. Adams will erect two 5-room dwellings; cost about \$3000.

Tex., San Antonio.—W. A. Baily will erect five 5-room dwellings; cost \$10,300.

Va., Pulaski.—Peoples Insurance & Realty Co., H. W. Thaxton, Secy.-Treas., contemplates erecting 5 dwellings; cost about \$10,000.

Va., Richmond.—Paul L. Ruehrmund will erect 2 frame dwellings; cost \$7000.

Va., Richmond.—Mrs. Emma W. Baker will erect six 2-story brick dwellings; cost \$16,000.

Va., Richmond.—Virginia Realty & Construction Co. will erect six 2-story brick dwelling; cost \$18,000.

Va., Richmond.—Mrs. Emma W. Barker will erect 6 brick dwellings; cost \$16,000.

Va., Richmond.—C. H. Archer will erect 2 brick dwellings on Boulevard; cost \$11,000.

Va., Richmond.—Muhleman & Kayhoe will erect 4 brick dwellings on Kensington Ave.; cost \$36,400.

Va., Richmond.—Realty & Finance Corporation will erect frame stucco dwelling at 1719 Hanes Ave.; cost \$4000.

Va., Richmond.—H. B. Overman will erect brick dwelling; cost \$4200.

Va., Richmond.—R. H. Alvis will erect frame dwelling; cost \$3500.

Va., Richmond.—W. L. Wells will erect 2-story brick dwelling; cost \$13,500.

Va., Richmond.—Realty & Finance Corp. of Virginia will erect 2-story frame and stucco dwelling on Hanes Ave.; cost \$4000.

Va., Richmond.—Wm. Henry White will

erect four 2-story brick dwellings; slag roof; cost \$12,500; construction by owner.

Va., Roanoke.—H. A. Hoover will erect 2-story residence; cost \$3000.

GOVERNMENT AND STATE

D. C., Washington.—Courthouse.—Elliott Woods, Supt. United States Capitol Building and Grounds, receives bids in duplicate for various items in connection with reconstruction of courthouse, most important being resurfacing building in limestone, including granite base course and reconstruction of roof; other items to follow; in each case notices will be issued naming date for receipt of bids or amount of deposit check for plans and specifications; intending bidders requested to file application for plans and specifications for items in which they are interested, such applications to be filed and issue made in accordance with progress of work; plans and specifications for stone work now ready for issue. (Previously noted.)

Ky., Marion.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., is reported to open bids March 15 to erect postoffice; cost about \$70,000.

La., Hammond.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids March 9 to erect postoffice; drawings and specifications obtainable from custodian of site at Hammond, or at office of Acting Supervising Archt.

Tenn., Martin.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids March 12 to erect postoffice; plans and specifications from Custodian at site, Martin, or Mr. Wetmore.

Tex., Bay City.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids March 7 to erect postoffice; drawings and specifications from custodian of site at Bay City or Mr. Wetmore.

Tex., Fort Sam Houston.—Kitchen.—Capt. Chas. Abel, Q. M. Corps, Constructing Q. M. receives bids until Feb. 13 to remodel hospital and kitchen and erect addition; brick; slate and tin roof; concrete floors; electric lights; will remove partitions and stairways in present structure, etc.; cost \$20,000. (Previously noted.)

Tex., Fort Sam Houston.—Cantonments.—Construction Quartermaster Southern Department, Fort Sam Houston, will erect troop cantonments at stations on border, Texas, Arizona and New Mexico; frame; felt roof; wood floors. (Lately noted to open bids Feb. 1.)

Va., Pulaski.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., receives bids until March 8 to erect postoffice; plans and specifications from custodian at site, Pulaski, or Mr. Wetmore.

HOSPITALS, SANITARiums, ETC.

Mo., Kansas City.—Grace Hospital Corporation has plans by W. Hilton Smith, Massachusetts Bldg., Kansas City, for hospital; 5 stories; provision for 3 additional stories; brick and concrete; fireproof; 40x105 ft.; reported cost \$150,000.

Mo., Kansas City.—Catholic Church will erect building for clinic and infirmary at University of Kansas City; brick; slate roof; tile floors; city lighting; install 2 electric elevators, one in old building and one in new building; cost about \$50,000; steam heat, \$5000; bids opened about Sept. 1. Address University of Kansas City, 910-11 Grand Ave. Temple, Kansas City. (Lately noted under Schools.)

Okla., Guthrie.—Methodist Hospital, 2002 W. Earner St., will probably build addition within 2 years; no definite details at present. (Lately noted.)

Okla., Muskogee.—Christian Hospital Assn., Jas. L. Wagner and others, Trustees, purchased building and will expend \$5000 to equip for hospital.

HOTELS

Ark., Williford.—A. Roman will erect \$10,000 hotel.

Fla., Zolfo.—John Collier and D. L. Skipper will erect 2-story building and additional story to building adjoining for store and hotel; probably let contract to W. C. Robinson, Fort Meade, Fla.

Fla., Miami.—Mrs. Lillie M. Flanagan is reported to erect 8-story addition to Fort Dallas Hotel; concrete; stores on first floor.

Ga., Columbus.—Waverly Hotel Co., Jno. A. Betjeman, Secy.-Treas., is considering remodeling Waverly Hotel to include extension of dining-room 20 ft., enlarge lobby, redecorate, etc.

Md., Flintstone.—Flintstone Magnesia Spring & Development Co., Cumberland, Md., Jas. J. Burns, Agent, contemplates erecting hotel. (See Miscellaneous Enterprises.)

Miss., Meridian.—Phil Weidmann has plans by Burt Stuart, Meridian, for hotel to be known as Phil Weidmann's Inn; 4 stories and basement; frontage 70 ft.; private electric-light plant; 60 rooms; construction begins about March 1.

N. C., Warsaw.—W. L. Hill is reported to erect \$50,000 hotel.

Tex., Dallas.—L. Genaro of Texas Produce Co. indefinitely postponed erection of 5-story hotel for which F. J. Woerner, 513 Sumpter Bldg., Dallas, is architect. (Previously noted.)

Tex., El Paso.—I. and L. Laskin have plans for store and hotel building. (See Stores.)

MISCELLANEOUS

Fla., Winter Haven.—Clubhouse.—Woman's Civic League will erect clubhouse; Dutch colonial style; 1½ stories; stucco; composition shingle roof; auditorium with balcony to seat 400; glassed-in porches, front and rear, connected by pergolas; cost \$15,000; completion by June 1; Bonfoey & Elliott, Architects, Tampa.

Fla., St. Petersburg.—Clubhouse.—Snell & Hamlett and H. Walter Fuller are interested in organizing Brightwaters Club, erecting clubhouse, constructing 18-hole golf course, etc.; plans for golf course drawn by North Shore Land Co.

La., New Orleans.—Cotton Exchange.—New Orleans Cotton Exchange leased 3-story building and will remodel pending erection of previously noted \$400,000 structure; install plate glass front, etc.

Md., Baltimore.—Stable, etc.—Dr. Don Preston Peters has plans by Smith & May, 1131 Calvert Bldg., Baltimore, for 2 buildings at Melrose and Bellona Aves., for barn and stable and garage; barn and stable to be 31x49 ft.; garage, 24x29 ft.; both structures to be hollow tile and plaster, with slate roof; following contractors are estimating: Gladfelter & Chambers, 36th St. and Roland Ave.; Milton C. Davis, 633 N. Calvert St.; W. E. Burnham, 406 Law Bldg.; all of Baltimore.

S. C., Chester.—Auditorium.—Baldwin Cotton Mills, E. R. Lucas, Secy.-Treas., will erect auditorium.

RAILWAY STATIONS, SHEDS, ETC.

La., New Orleans.—Public Belt R. R. of New Orleans, W. J. Hardee, Ch. Engr., New Orleans, is reported to erect \$16,000 produce terminal.

Mo., Sikeston.—Iron Mountain R. R., W. L. Cole, Gen. Mgr., Keswick, Cal., will erect \$25,000 station.

N. C., Newton.—Southern Ry. System, B. Herman, Ch. Engr. M. W. & S., Washington, D. C., will erect passenger station; 100 ft. long; frame or brick; tile roof; construct walkways, teamways, etc.; cost \$12,000 or \$18,000.

Tenn., Chattanooga.—Southern Ry. System, B. Herman, Ch. Engr., Washington, D. C., will expend \$8000 to remodel station on Market St.

Tenn., Kingsport.—Chesapeake & Ohio Ry., F. I. Cabell, Ch. Engr., Richmond, Va., will erect passenger station; 160x38 ft.; reported cost, \$50,000.

Va., Suffolk.—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, Va., will erect warehouse at present site Virginia-Carolina Co.'s plant; brick and cement; 50x220 ft.; individual offices; steam heat.

W. Va., Huntington.—Chesapeake & Ohio Ry. Co., F. I. Cabell, Ch. Engr., Richmond, does not contemplate erecting depot at this time. (Lately noted.)

SCHOOLS

Ala., Collinsville.—Town will erect school to replace structure lately noted damaged by fire at loss of \$10,000; brick; metal roof; wood floors; construction begins in spring or summer; cost about \$15,000; W. A. Wilbanks, Town Clerk.

Ala., Opelika.—City, Dr. J. G. Palmer, Mayor, will receive plans and specifications for high school to replace structure damaged by fire at loss of \$50,000; about 80x130 ft.; 2 stories; cost \$20,000 to \$30,000; bids opened about Mch. 1. Address S. O. White. (Lately noted.)

Ala., Sylacauga.—School Board will erect \$30,000 school building; W. L. Howard, Mayor.

Ark., Atkins.—Atkins School Dist. has plans by Jos. H. Bliss, Little Rock, for school; 74x158 ft.; ordinary brick construction; metal roof; wood floors; cost \$20,000; steam heat, \$3500; bids opened Mch. 15; construction begins May 1. Address architect. (Lately noted.)

Ark., Dover.—Dover School Dist. No. 17 receives bids until Feb. 15 to erect school; 2 stories; brick; 80x70 ft.; tile roof; wood floors; cost \$10,000; Jos. H. Bliss, Archt., Little Rock. (Lately noted.)

Ark., Plainview.—Plainview School Dist. has plans by James H. Bliss, to erect school; \$17,000 bonds voted.

Ark., Fordyce.—School Board plans to erect school to replace structure lately noted damaged by fire; is considering fireproof building with indoor gymnasium, science laboratory, auditorium to seat 550; study hall to seat 150; 2 open-air classrooms, etc.; cost \$75,000.

Fla., Howey.—Howey School Dist. plans to issue bonds to erect \$10,000 brick school building. Address Dist. School Trustees.

Fla., Winfield.—Board of Public Instruction of Columbia County, Lake City, Fla., James R. Lites, Supt. and Secy., receives bids to erect 3-room school for negroes in Winfield No. 1 Sub-School Dist.; plans and specifications at office J. B. Porter, Lake City.

Ga., Athens.—Concord Normal School will petition Legislature for \$100,000 appropriation for dormitory; accommodate 150 girls; A. F. Wysong, Archt., Princeton, W. Va.

Ga., Jackson.—City is considering election on bonds to erect school; estimated cost of building, grounds and equipment \$22,000; J. H. Ham, Pres. Board of Education.

Ky., Carrollton.—Carrollton Graded School Dist. No. 1 voted \$25,000 bonds to erect and equip schools; J. P. Wheeler, C. A. Hill, G. W. Johnson and others, Trustees. (Lately noted.)

Miss., Belzoni.—City will vote on \$5000 to erect negro school. Address The Mayor.

N. C., Raeford.—School Trustees, J. W. McLaughlin, Chrmn., receive bids until Feb. 27 to erect school; 2 stories; brick; basement; ordinary construction; steel; tile floors; terra cotta trim; galvanized iron finish; warm-air heat; estimated cost \$25,000; plans and specifications at office H. E. Bonitz, Archt., Wilmington, N. C.

N. C., Winston-Salem.—City votes March 27 on \$50,000 school bonds. Address The Mayor.

Okla., Nowata.—Nowata School Dist. votes Feb. 6 on \$50,000 school bonds. Address Dist. School Trustees.

Okla., Oklahoma City.—Oklahoma City School Dist. plans to issue \$650,000 school bonds. Address Dist. School Trustees.

Okla., Tulsa.—Kendall College, Dr. Chas. Evans, Pres., will erect 7 buildings to include 2 dormitories, science hall, library building, dining hall, heating plant and gymnasium; cost \$50,000. (Lately noted in part.)

Okla., Tulsa.—City votes Feb. 6 on \$500,000 bonds to purchase sites, erect and equip schools; J. H. Simmons, Mayor. (Previously noted.)

S. C., Chesterfield.—School Trustees are considering election on \$5000 school bonds.

Tenn., Chattanooga.—City will petition Legislature for authority to vote on \$400,000 school bonds. Address The Mayor.

Tex., Cleburne.—City voted Feb. 28 on \$250,000 school bonds. Address The Mayor. (Lately noted.)

Tex., Dallas.—City will probably vote in April on \$500,000 school bonds. Address The Mayor.

Tex., Palestine.—Northeast Texas Christian Convention will erect academic hall and girls' dormitory; 3 stories; about 40x84 ft.; frame or brick; if frame, shingle or rubber roof; wood floors; stoves; cost \$20,000 to \$25,000; bids opened about Feb. 1; J. L. Randolph, Archt., Palestine. Address R. C. Drisdale, Route 4, Box 7, Palestine. (Lately noted.)

Tex., Waxahachie.—City, through J. L. Gammon, receives bids until Feb. 8 to erect high school; reinforced concrete; fireproof; cost \$80,000; plans at office C. H. Page & Bro., Architects, Austin, Tex. (Lately noted.)

Va., Lebanon.—C. B. Kearfott, Bristol, Tenn., is preparing plans for \$20,000 school as addition to old State Agricultural High School; will also remodel dormitory.

Va., Richmond.—St. Peter's Academy in charge of Xaverian Brothers, has tentative plans for parish school; 3 stories; fireproof; cost \$35,000 to \$50,000.

STORES

Ala., Girard.—R. L. Easterwood will erect store building; frame; 20x40 ft.

Ala., Huntsville.—J. E. Allen acquired brick building on Cedar St. and will remodel for store.

Ark., Clarksville.—R. D. Dunlap & Son will erect 3 brick store buildings.

Ark., Fouke.—Owners Scoggins Bldg. will erect addition to building; to be occupied by Shaw, Brooks Mercantile Co.

Ark., Fort Smith.—J. N. Ward will remodel building.

Ark., Glenwood.—C. H. Penrod will erect brick store building.

Ark., Washington.—W. J. Johnson & Co. will erect brick business building; 40x100 ft.

D. C., Washington.—Harry A. Kite, 1338 G St. N. W., has plans for store building. (See Dwellings.)

Fla., Zolfo.—John Collier and D. L. Skipper will erect building and additional story to adjoining building for store and hotel. (See Hotels.)

Fla., Miami.—Mrs. Lillie M. Flanagan is reported to erect addition to Fort Dallas Hotel to contain stores on first floor. (See Hotels.)

Fla., Vero.—Woodmen of the World plan to erect store and lodge building; 2 stories.

Ga., Hawkinsville.—E. A. Goode contemplates erecting brick building.

Ga., La Grange.—Calloway Department Store is reported as probably to erect 1 or 2-story business building.

Ga., Macon.—McClure Ten Cent Co. leased 2 adjoining buildings on Cherry St.; will remodel and convert 3 buildings into one.

Ga., Macon.—Shingler, Cummings & Shingler will erect store buildings on Cherry St.; 75x103 ft.; 2 stories; brick; terra-cotta fronts; tar and gravel roof; steam heat; cost \$15,000; P. E. Dennis, Archt., American National Bank Bldg., Macon.

Ga., Macon.—Burden, Smith & Co. leased Cabart Bldg.; will remodel and connect to present building; 2 stories and basement; steel ceilings, hardwood floors, etc.; cost \$5000, not including fixtures; Hupp & Shelverton, Archts., Macon.

Ga., Macon.—Chas. Wachtel Clothing Co., A. H. Wachtel, Secy. and Gen. Mgr., leased adjoining building and will convert into one building; 54-ft. frontage, plate-glass front, etc.

Mo., St. Louis.—S. S. Kresge Co., Detroit, Mich., is reported to erect building at Washington Ave. and 6th St.; 4 stories; cost about \$400,000. Company wires Manufacturers Record: "Cannot give information; do not know."

N. C., Beaufort.—Ramsey Grocery Co. will erect store building; 65x90 ft.; 1 story; 14-ft. pitch; tin roof; will receive bids. (Lately noted.)

N. C., Greensboro.—L. M. Ham will erect store and office building; 3 stories; pressed brick front; plate-glass show windows.

N. C., Newton.—Estate of Dr. T. W. Long and Capt. Andrew Long will erect store building; 50x80 ft.

N. C., Statesville.—W. A. Dearman will erect store building.

N. C., Winston-Salem.—S. H. Kress & Co., 350 Broadway, New York, and Leak-Cobb Co. will erect 2 store buildings at 4th and Main Sts., to cost about \$70,000; Seymour Burrell, 350 Broadway, New York, is preparing plans for S. H. Kress & Co.'s building; 2 and 3 stories; brick or reinforced concrete; 43x200 ft.; plans for Leak-Cobb Co.'s building are being prepared by Northup & O'Brien, Winston-Salem; 30x200 ft.; 2 and 3 stories; probably stucco tile; 1 store on 4th St., 5 or 6 on Main St.; upper stories for offices.

Okla., Tulsa.—E. F. Hannon will erect produce building on Main St.; 3 stories and basement; cost \$125,000; will be occupied by Hannon & Ladd.

S. C., Georgetown.—Hyman-Schneider Co. will remodel store building on Front St.; plate-glass front.

S. C., Greenville.—H. Olin Jones, Greenville, is preparing plans for 4 stores at Main and North Sts.; enameled or impervious brick; one or two stories.

Tenn., Knoxville.—William McKinly Council, Jr. O. U. A. M., plans to erect building. (See Association and Fraternal.)

Tenn., Maryville.—Porta Manard Furniture Co. will erect 2-story business building; 35x90 ft.

Tex., El Paso.—Jolly & Morris will erect building at Piedras & Ross Sts.; cost \$5000.

Tex., El Paso.—Standard Grocery Co. will erect 3 or 4-story building; fireproof.

Tex., El Paso.—L. F. Campbell and others are reported to erect apartment and store building. (See Apartment-houses.)

Tex., El Paso.—I. and L. Laskin have plans by Trost & Trost, El Paso, for store and hotel building at Overland and San Jacinto Sts.; 76x102 ft.; 3 stories; reinforced concrete fireproof construction; Barrett roof; reinforced concrete and maple floors; cost \$65,000; steam heat, \$5000; 3-way prism vault lights, \$3000; electric elevator; bids opened Feb. 10. (Lately noted.)

Tex., Fort Worth.—E. D. Farmer will erect store at 11th and Houston Sts.; 150x95 ft.; 3 stories; provision for 2 additional; estimated cost \$75,000; 2 upper floors leased by S. H. Kress & Co., 350 Broadway, New York. (S. H. Kress & Co., lately noted to erect building.)

Tex., Houston.—W. H. Haynes, 1008 McIlhenny Ave., will erect store and apartment building at Main & McIlhenny Ave.; 50x100 ft.; interlocking hollow tile; tar paper and shell roof; cement floors; cost \$30,000; steam heat, \$1600; all materials purchased; plans and construction by owner. (Lately noted.)

Tex., Navasota.—A. F. & A. M. will erect Masonic temple to contain stores. (See Association and Fraternal.)

Tex., San Antonio.—H. W. Fous will erect brick store; cost \$3000.

Tex., San Antonio.—P. C. Schifers will erect \$6000 store building.

Tex., Victoria.—Praeger & Dixon, Archts., Victoria, are receiving bids to erect 2-story and basement brick store; 70.3x83.3 ft.; also 1-story brick store; 46x30 ft.; plans and specifications on application.

W. Va., Welch.—McNary & Johnson will erect 3-story and basement brick business building; plans in progress.

THEATERS

La., New Orleans.—Sobel-Richards-Shears Enterprise is reported to erect photoplay theater.

Mo., Kansas City.—Charles H. Elliott, 1323 E. 10th St., has plans by Clifton Sloan, Kansas City, for moving-picture theater; 40x90 ft.; brick and concrete; concrete floors; other details not decided. Address owner. (See Machinery Wanted—Seating; Ventilating.)

Okla., Tulsa.—Dr. Walter E. Wright will erect theater and office building. (See Bank and Office.)

Va., Petersburg.—Walter Sachs and others plan to erect theater; seating capacity 1100.

W. Va., Bluefield.—Samuel L. Matz will erect theater; steel and brick; fireproof; concrete floors; hot-water heat; electric and gas lights; cost about \$3000; construction begins in March. Address owner. (Lately noted.)

W. Va., Charleston.—Thos. W. Lamb, 644 Eighth Ave., New York, is preparing plans for remodeling Burlew Theater at cost of \$50,000; will increase seating capacity from 1200 to 2087; construction begins Apr. 1.

WAREHOUSES

Ark., Clarksville.—Laser Grain Co. will erect warehouse; brick.

Ark., Fort Smith.—Ward Furniture Co. will erect addition for warehouse; 2 stories; frame; 80x100 ft.; cost \$3000.

Fla., Miami.—City will erect transfer warehouse. (See City and County.)

Ga., Augusta.—Central Real Estate & Warehouse Co. plans to erect cotton warehouse; capacity 5000 bales; leased to Clarke & Butt.

Ky., Louisville.—Warehouse Architectural & Engineers' Co., C. H. Moores, Prest., Chicago, will erect warehouse and terminal building; reinforced concrete monolithic construction; fireproof; brick and tile curtain walls; 1,500,000 sq. ft. floor space; frontage 1075 ft.; sprinkler system; track room to accommodate 25 cars in service and 75 cars in storage on railroad side; capacity for 64 wagons and trucks under one roof; gravity conveyors; outside elevators; electric trucks; accommodations for manufacturing, storage, etc.; probably cold-storage unit later; construction begins in 90 days; reported cost, \$2,500,000.

La., Chalmette.—American Sugar Refining Co. will erect coopeage warehouse annex; 150x200 ft.

La., Monroe.—H. C. Elder, representing Continental Supply Co., purchased site, 200x135 ft., for erection of warehouse.

La., New Orleans.—Seidel Furniture Co. will erect 2-story plant and warehouse.

La., New Orleans.—Schroeder-Blattman Sheet Metal Works will erect garage and

warehouse; 35x127 ft.; brick walls; ready roofing; bids opened first week in Feb.; plans by owner; cost \$3000.

Md., Baltimore.—Snow, Ward & Co., 200-202 E. Lombard St., will erect \$20,000 warehouse at Water St. and Cheapside; 3 or 4 stories.

Mo., Kansas City.—Stevens Grease & Oil Co. will erect 4-story stucco and iron warehouse; cost \$9000.

Mo., Kansas City.—Joseph Knoche and Lewis Trippe, representatives of Knoche Estate Co., are having plans prepared by Ernest O. Brostrom, 1113 McGee St., Kansas

City, for warehouse to be leased by Wurzer & Blount; 2 stories; foundation for 5-story structure; 60x142 ft.; completion within 90 days.

Tex., Dallas.—Edwin B. Doggett is reported to erect \$50,000 warehouse; 100x100 ft.; 4 stories; concrete and steel; sprinkler system; elevator.

Tex., El Paso.—V. E. Ware will erect warehouse and factory; reported cost \$95,000.

Tex., Wichita Falls.—Nash Hardware Co., Fort Worth, is reported to erect 3-story concrete warehouse and office building.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—Stanley McConnie let contract to Wm. P. Lipscomb & Co., 1405 G St. N. W., Washington, to remodel 5-story apartment-house at 1785 Massachusetts Ave. N. W.; cost \$2900; J. H. De Sibour, 1603 K St. N. W., Washington.

Ga., Atlanta.—H. W. Nicholes & Son, 319 Myrtle St., let contract to erect 3-story apartment-house; 15 apartments; 6 rooms each; hollow tile and brick veneer; tile, tar and gravel roof; hardwood floors; Hart & Krouse vapor system of heating; cost \$75,000. (Lately noted.)

La., Alexandria.—Wilfred Gehr is reported to have let contract to Gehl Construction Co., Alexandria, to erect apartment-house; 2 stories; 4 6-room suites; stucco exterior; steam heat; vacuum cleaning apparatus.

Md., Baltimore.—Oakland Apartment Co. let contract to C. W. Littleton & Son, 4313 Liberty Heights Ave., Baltimore, to erect 3-story apartment-house at Walbrook Ave. and Windsor Mill Rd.; brick; 41x100 ft.; 4 suites on each floor; cost \$30,000; Stanislaus Russell, Archt., 2900 Clifton Ave., Baltimore. (Lately noted.)

Md., Baltimore.—Jackson Realty Co. has plans by Stanislaus Russell, 2900 Clifton Ave., and let contract to Israel Silberstein, 612 Equitable Bldg., both of Baltimore, to erect five 2-story apartment-houses on east side of Pennsylvania Ave. between Orem and Whittier Aves.; 32x50 ft.; 3 suites of 5 rooms and bath; brick and stone; tile roofs; 2 apartment-houses to have stores on first floor; cost about \$50,000.

Tenn., Nashville.—Mrs. T. L. Herbert let following contracts for erection of apartment-house at 604-06 Russell St.: Foundation, Gould Contracting Co.; brick work, Bush Building Co.; concrete work, Foy Proctor Co.; plastering, Southern Plastering Co.; carpenter work, Jas. L. Howell & Sons; roofing, Chas. C. McInturf; tile work, H. E. Farmer; heating, David Grewer Co.; plumbing, East Side Plumbing Co.; painting, Chas. A. Howell; all of Nashville; electric work and cut stone work not let; plans by C. K. Colley, Fourth and First National Bank Bldg., Nashville, call for 3 stories; brick and reinforced concrete; six 3-room and six 4-room apartments; tar and gravel roof over reinforced concrete; reinforced concrete floors overlaid with oak; low pressure steam heat; cost \$30,000. (Lately noted.)

Tenn., Nashville.—Thos. Parker, Jr., let following contracts for erection of apartment-house at 148 Seventh Ave.: Plastering, J. R. McConnell & Co.; foundation, Gould Contracting Co.; brick work, Nashville Brick & Tile Co.; cut stone work, Nashville Cut Stone Co.; concrete work and roofing, Adamant Stone & Roofing Co.; plumbing, Chas. n. McGee; heating and electric work, Nashville Machine Co.; carpenter work, M. M. Graham & Co.; painting, S. J. Underwood; glazing, Riddle Co.; tile and marble work, H. E. Farmer; oak flooring, Bigger & McGregor; all of Nashville; plans by C. K. Colley, Fourth and First National Bank Bldg., Nashville, call for 3 stories; brick and reinforced concrete; three 2-room, five 4-room and five 3-room apartments; cost \$32,000. (Lately noted.)

ASSOCIATION AND FRATERNAL

Ala., Langdale.—Langdale Mills of West Point (Ga.) Mfg. Co. let contract to erect building for lodge hall, etc. (See Stores.)

BANK AND OFFICE

Ark., Little Rock.—Thalman & Reed, Little Rock, have contract to remodel building for Lasker Morris Bank & Trust Co. at 4th and Main Sts.; reinforced concrete vault, etc.; tile floors; cost \$5000, exclusive of fixtures; contracts let; Theo. M. Sanders, Archt., Little Rock. (Lately noted under Stores.)

La., Lake Charles.—Leopold Kaufman let contract to erect store and office building. (See Stores.)

Okla., Tulsa.—Exchange National Bank let contract to Selden-Breck Construction Co., Fullerton Bldg., St. Louis, to erect bank and office building; 90x90 ft.; reinforced concrete skeleton; composition roof; cement floors; Otis elevator; cost \$400,000; Weary & Alford Co., Archt., Chicago; following subcontracts let: Granite, Maine & New Hampshire Granite Corporation, North Jay, Me.; metal windows, Harry C. Knisely Co., Chicago; ornamental iron, Flour City Ornamental Iron Co., Minneapolis, Minn.; plastering, Smith & McCallin, Denver, Col.; hollow metal, Zahner Metal Sash & Door Co., Canton, O.; sidewalk lights, American 3-Way Prism Co., LaPorte, Ind.; roofing, Patent Vulcanite Roofing Co., Kansas City, Mo. (Previously noted.)

S. C., Spartanburg.—J. T. Willard and others will erect theater building to contain offices. (See Theaters.)

Va., Danville.—Patton, Temple & Williamson let contract to L. B. Flora, Danville, to erect office building; 50x100 ft.; brick; composition roof; tile and hardwood floors; cost \$15,000; heating system, \$3500; Heard & Caldwell, Archts., Danville; construction begun. Address Contr. (Lately noted.)

CHURCHES

Tex., Cleburne.—A. L. Graham, Cleburne, prepared plans for and has contract to erect church building; 60x84 ft.; brick; metal shingle roof; concrete and plank floors; cost \$15,000. (Church of Christ lately noted to erect building.)

DWELLINGS

Ala., Lanett.—Lanett Cotton Mills let contract to West Point Iron Works, West Point, Ga., to erect 60 cottages for operatives; 4, 5 and 6 rooms; ordinary construction; shingle roof; cost \$50,000; materials purchased. (Lately noted.)

D. C., Washington.—Bertha L. Ganter let contract to Wm. A. Kimmel, Evans Bldg., Washington, to erect residence on 32nd St. N. W.; 2 stories; 28x24 ft.; frame and stucco; slate roof; wood floors; cost \$5000; vapor heat, \$450; Wm. A. Vaughn, Archt., Barrister Bldg., Washington. Address contractor. (Lately noted.)

D. C., Washington.—Robert Mayo, Jr., let contract to D. F. Swab, 426 Rittenhouse St. N. W., Washington, to erect residence at 700 Piney Branch Rd.; cost \$6400; J. R. Kennedy, Archt., 1845 Newton St. N. W., Washington.

Fla., Orlando.—W. M. Glenn let contract to Walter E. Brown, Orlando, to erect lately noted residence; 14 rooms; frame; stucco exterior; shingle roof; hardwood floors; cost \$3000; hot-air heat, \$300; sidewalks and drives, \$300; M. S. King, Archt., Orlando. (See Machinery Wanted—Tile.)

Fla., Vero.—Sloan Bros. let contract to erect 2 bungalows.

Ga., Atlanta.—Louis Regenstein let contract to W. P. Francis, Atlanta, to erect residence in Druid Hills; 2 stories; hollow tile with plastered walls; slate roof; wood floors; cost \$16,000; Hentz, Reid & Adler, Archts., Atlanta.

Ga., Augusta.—Alexander, Goodwin & Garrett let contract to T. O. Brown & Son, Augusta, to erect 5 residences in Tubman Park; 2 stories; Bleckley & Irvin, Archts. (Lately noted.)

Ky., Paintsville.—J. B. Songer let contract to Ernest Turner, Paintsville, to erect residence.

Miss., Clarksdale.—Mrs. M. C. Anderson let contract to Estes & Williams, Clarksdale, to erect 3-room addition to rooming-house; frame; wood-shingle roof; edge-grain yellow pine floors; hot-air heat; cost \$4000; M. M. Alsop, Archt., Clarksdale. (Lately noted.)

N. C., Charlotte.—Conrad Realty Co. is reported to have let contract to erect 2 bungalows in Locke Wood addition.

N. C., Wilmington.—Thos. H. Wright let contract to L. H. Vollers, Wilmington, to erect residence; colonial style; cost \$10,000; Gause & Lynch, Archts., Wilmington.

Okla., Tulsa.—E. G. Lewis has plans by J. W. Winkler and let contract to Latimer-Rouse-Construction Co., both of Tulsa, to erect residence; 30x34 ft.; frame; shingle roof; oak floors; furnace heat; cost \$6500; construction begun. (Lately noted.)

Tex., Dallas.—Jacob Yonack let contract to Loyd & Gray, 2506 Grand Ave., Dallas, to erect residence; 2 stories and basement; 10 rooms; hollow tile, veneered with face brick; asphalt shingle roof; pine sub-floors with oak surface; tile baths; electric lighting; cost \$16,000; hot-water heat, \$1260; Harre M. Bernet, Archt., 1014 Busch Bldg., Dallas. (Lately noted.)

Tex., El Paso.—L. G. Lambright, 1512 Elm St., let contract to Geo. Sharp, El Paso, to erect two 6-room bungalows; brick; composition roof; hardwood floors; Niagara heating system; cost \$2985; electric lights; sidewalks. (Lately noted.)

Tex., Houston.—J. A. Holland let contract to H. C. Vogt, 607 Harold St., Houston, to erect residence; 8 rooms; 2 stories; frame and stucco; shingle roof; pine sub-floor and 5-16 oak strips; cost \$3200; cement sidewalk; construction begun. Address contractor. (Lately noted.)

Tex., Houston.—Chas. Sigler, Beaumont, Tex. (temporary address), let contract to Cottage Construction Co., Houston, to erect residence; stucco; shingle roof; hardwood floors; cost \$6000; sidewalks, \$100; construction to begin at once; Finger & Bailey, Archts., Houston. Address owner. (Lately noted.)

Va., Richmond.—J. Kerr Branch let contract to Wm. P. Lipscomb & Co., 1405 F St. N. W., Washington, D. C., to erect residence; brick; Brier Cliff sandstone trimmings; 2 stories, basement and attic; slate and tile roof; Italian style; 11 baths; grounds inclosed in brick wall; estimated cost, \$160,000; John Russell Pope, Archt., 527 5th Ave., New York. (Lately noted.)

GOVERNMENT AND STATE

Md., Indian Head.—Proving Station.—Bureau of Yards and Docks, Navy Dept., Washington, let contract to Penn Bridge Co., Beaver Falls, Pa., to erect 3 buildings at proving station. (Lately noted to open bids Jan. 15 to erect 6 storehouses.)

Mo., Carthage.—Armory.—Henry Cowgill let contract to James Logan & Co., Carthage, to erect armory for Company A; brick and tile; 60x50 ft.; hard maple floors; cost \$5500.

MISCELLANEOUS

Ala., Birmingham.—Auditorium.—Birmingham Automobile Show, Henry B. Marks, Mgr., let contract to Small man & Brice Co., Birmingham, to erect auditorium.

RAILWAY STATIONS, SHEDS, ETC.

Va., Wellington.—Southern Ry. System, B. Herman, Ch. Engr., Washington, D. C., let contract to L. C. Abbott, Brandy, Va., to erect combination freight and passenger station; frame; 21 ft. 4 in. by 55 ft. 4 in.; separate waiting-rooms for white and colored passengers; office-room, 8 ft. by 23 ft. 9 in.; freight-room, 20 ft. 6 in. by 31 ft.

SCHOOLS

Ark., Jonesboro.—Board of Education let contract to H. A. Lesmeister, Jonesboro, to erect high school; 116x124 ft.; brick and wood; composition shingle roof; wood floors; cost \$40,000; steam heat, \$5000; electric lights, \$900; R. H. Hunt, Archt., Chattanooga, Tenn. (Other contracts lately noted.)

Ga., Atlanta.—Fulton County Board of Education has plans by John C. Battle, Atlanta, and let contract to Donaldson & Pierson also of Atlanta, to erect Peachtree Heights School on Peachtree Rd.; 8 rooms; granite; tile roof; wood floors; heating not determined; cost \$15,000; Robert B. Cridland, of Cridland & Jacobs, Philadelphia, Landscape Archt. (Lately noted.)

Ga., Augusta.—Board of Education, Lawton B. Evans, Secy., let contract at \$7247 to Palmer-Spivey Construction Co., Augusta, to erect Tubman High School for girls; fireproof; concrete, stone and tile; 3 stories; corridor entire width of building, with porte-cochères at ends; 21 classrooms, 2 study halls; assembly hall to seat 900; commercial,

art and musical departments; library 22x32 ft.; locker-rooms; program signal clock, with signal bell in each room; laboratories with gas, water and electric current; 2 sanitary drinking fountains on each floor; fire-escapes, heating, electric fixtures, etc.; G. Lloyd Preacher, Archt., Augusta. (Lately noted.)

Ga., Valdosta.—South Georgia Normal College let contract to Southern Ferro-Concrete Co., Atlanta, to erect administration building; also to Ferrell Heating & Plumbing Co., Atlanta, for heating; plans by Edwards & Sayward, Atlanta, call for brick building; tile roof; cost \$65,000. (Lately noted.)

Md., Baltimore.—Sisters of Bon Secour let contract to T. D. Keating, 2213 W. Baltimore St., Baltimore, to erect 4-story brick school at Fayette and Pulaski Sts.; 40x33 ft.; cost \$50,000; Hugh I. Kavanagh, Archt., 226 E. Eager St., Baltimore. (Lately noted.)

Mo., Cameron.—Missouri Wesleyan College let contract to M. S. Martin, 597 Hannibal Trust Bldg., Hannibal, Mo., to erect liberal arts building; 3 stories; 100x160 ft.; brick walls; slate roof; fireproof floors; steam heat; electric lights. (Previously noted.)

Tex., Fort Worth.—School Board let contract to Echols, Watt & Payne, 1010 1/2 Main St., Fort Worth, to erect addition to Denver Avenue School; 26x36.5 ft.; fireproof; composition roof; cost \$13,406; Sanguinett & Staats, Archts., Fort Worth. Address contractors. (Lately noted.)

Tex., Paris.—City has plans by Sanguinett & Staats and Barry, Smith & Withers, Paris, and let contract to Foster & Varner, also of Paris, to erect high school; 204x196 ft.; semi-fireproof; asbestos roof; concrete floors; cost \$95,000; also let sub-contracts at \$23,000 to Kinnison Bros., Dallas, Tex., for heating; at \$5000 to Barden Electric Co., Houston, Tex., for lighting, installing telephones, clocks, etc.; sidewalks to cost \$3000; construction to begin at once. Address contractors. (Previously noted.)

Tex., San Antonio.—School Board let contract to H. A. Schoenfeld, 219 Lowell Ave., San Antonio, to erect administration building; 109x136 ft.; 2 stories and basement; concrete frame; brick and tile walls; Barrett specification roof; concrete slab and steel floor/tye floors; sidewalk lights; cost \$79,000; Ralph H. Cameron, Archt., San Antonio. Address Contr. (Other contracts lately noted.)

Va., Norfolk.—Jesse Johnson, 618-19 Law Bldg., Norfolk, general contractor to erect W. H. Taylor School at Claremont and Baldwin Aves., let following subcontracts: Stone work, Consolve & Overmeyer; brick work, A. W. Veazey; electric work, Meeks-Reed Co.; plastering, G. T. Crump; lumber and millwork, C. M. Baylor & Co.; terrazzo work, White Hardware Co.; roofing and sheet-metal work, Odenhal-Monks Corporation; blackboards, Bohn Roofing Co.; Kalmeln doors, American Sheet Metal Works of Virginia; sash and doors, Building Supplies Corporation; plumbing, W. N. Thornton; painting, H. C. Harding; heating, M. A. Williams; all of Norfolk; ornamental and miscellaneous iron, Richmond Structural Steel Co., Richmond, Va.; reinforcing materials and steel sash, Trussed Concrete Steel Co., Youngstown, O.; plans by J. K. Peebles, Norfolk, call for structure 171x120 ft.; fireproof; gravel roof; concrete floors; steam heat; cost \$80,000. (Lately noted.)

W. Va., Charleston.—Board of Education of Charleston Independent School Dist. let contract to Cullen & Vaughn, Columbus, O., to erect graded school in Tenth Ward; 61x116 ft.; brick; 2 stories; tar and gravel roof; wood floors; mechanical heating and ventilation system; heating, plumbing and electric work reserved; James L. Montgomery, Archt., Charleston, W. Va.; also to same contractors to erect Junior High School; Frank L. Packard, Archt., Columbus, O.; heating and ventilating and electric work not yet awarded. (Lately noted.)

STORES

Ala., Langdale.—Langdale Mills of West Point (Ga.) Mfg. Co. let contract to West Point Iron Works, West Point, Ga., to erect store and lodge hall; 2 stories; brick; gravel roof. (Lately noted.)

Ark., Glenwood.—Glenwood Drug Co. will erect store building; contract let.

Fla., Miami.—J. A. Dann let contract to Crump Construction Co., Miami, to erect store and shop building; 48x300 ft.; concrete walls; asbestos built-up roof; electric lights from city plant; cost \$20,000; A. E. Lewis, Archt., Miami, may be addressed. (Lately noted.)

Fla., Vero.—W. P. and H. R. Sloan let

contract to John H. Crosby, Vero, to erect store building; 2 stories; frame; 40x40 ft.

Ga., Atlanta.—Sharp, Boylston & Day let contract to C. W. Bernhardt, Atlanta, to repair building at 89 Whitehall St.; cost \$5500.

Ga., Atlanta.—J. W. Alexandra let contract to C. Shelverton, Atlanta, to remodel building at 51-53 E. Alabama St.; 5 stories.

Ga., Albany.—Owners Ventulett Bldg. let contract to Smith & Watson, Albany, to remodel building for F. W. Woolworth & Co., New York; cost \$10,000.

Ky., Crestwood.—J. E. Potts let contract to Hampton & Dick, Crestwood, to erect store building; 25x107 ft.; brick veneer; corrugated galvanized roof; stoves; electric lights; cost \$4000; Brinton B. Davis, Archt., Inter-Southern Bldg., Louisville. (Lately noted.)

La., Lake Charles.—Leopold Kaufman let contract to P. Olivier & Son, Lake Charles, to erect store and office building on Ryan St.; 83x33 ft.; Barrett roof; wood floors on sanitary filling; cost \$20,000; gas heat, \$1000; E. W. Phillips, Archt., Lake Charles. (Lately noted.)

Md., Baltimore.—Jackson Realty Co. let contract to erect 2 apartment-houses with stores on first floor. (See Apartment-Houses.)

Mo., Carthage.—Henry Cowgill let contract to James Logan & Co., Carthage, to erect addition to old Lanpher Bldg.; 1 story; 15x50 ft.; to be occupied by Carthage Battery Co.

Md., Hagerstown.—Brewer & Myers let contract to erect store building; 2 stories; stucco; Spanish tile roof; 18-ft. ceiling; 42x142 ft.; completion by Mch. 20.

S. C., Spartanburg.—J. T. Willard and others will erect theater building to contain stores. (See Theaters.)

Va., Richmond.—Mrs. Essie L. Katz let contract to F. H. Boatwright, Richmond, to erect one 2-story and two 1-story brick stores; tin roof; cost \$10,000.

Va., Richmond.—Mrs. A. Dietrich let contract to J. C. Benzley & Co., Richmond, to erect 3-story brick store; steam heat; electric lights; slag roof; cost \$7000.

THEATERS

N. C., Charlotte.—Edisona Theater let contract to erect 20-ft. addition to building; seating capacity 150.

S. C., Spartanburg.—J. T. Willard, O. L. Johnson and P. B. Langford let contract to Willard-Boggs Co., Spartanburg, to erect store, office and theater building on Main St., extending to Broad St.; 50x182 ft.; ordinary construction; Barrett specification and tin roofing; steam heat; 2 stories; 15-ft. arcade, 68 ft. long, flanked on each side with stores, with ornamental tile prism fronts set in copper; second floor for offices; 2 stairways in arcade; plans for theater by S. P. Tinsley, Spartanburg, call for auditorium, 50x100 ft., with balcony in rear and stage in front; fireproof; seating capacity 1000; cost \$20,000; to be occupied by Rex Theater. (Lately noted.)

WAREHOUSES

Fla., Tampa.—Florida Auto & Gas Engine Co. is reported to have let contract to McGucken & Hyer, Tampa, to erect garage and plumbing-supply warehouse.

Md., Baltimore.—McDonnell Estate let contract to John E. Marshall & Son, 121 Mercer St., Baltimore, to erect 3-story brick warehouse at 225 W. Saratoga St.; cost \$17,000 to \$18,000; to be leased by Cohen & Hughes, 315 N. Howard St.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Bank Fixtures.—J. R. Fant, Sapulpa, Okla.—Prices on safe, vault and bank fixtures.

Bicycles, etc.—J. Lecomte Fils, 25 Rue des Blancs Manteaux, Paris, France.—To represent manufacturers of: Bicycles for men and women; detached parts for bicycles; accessories such as lamps, bells, saddles, adjustable speeds, tools, etc.

Boilers.—Water Commrs., Macon, Ga.—Bids until Feb. 3 on 520 H. P. horizontal water tube boilers; specifications on application.

Boiler.—See Chair Machinery.—White Oak Chair Co.

Boiler.—See Engine (Hoisting).—Jewel Supply & Equipment Co.

Boring Mill.—G. J. Adams, Consult. Engr., 39 South St., New York.—10-ft. vertical boring mill. (See Crusher (Coal), etc.—G. J. Adams.)

Bridges.—See Road and Bridge Construction.—Maryland State Roads Commission.

Bridges (Concrete).—See Road Construction.—Barbour County Court.

Broom Machinery.—C. B. Greear, Honaker, Va.—Addresses of makers of machinery for manufacturing brooms.

Building Materials.—Barkman & Woodall, Box 101, Ayden, N. C.—Prices on general building materials.

Building Materials, etc.—J. Rice Scott, Engr., and A. C. Price, Archt., Bartow, Fla.—Catalogs, samples and prices (for file) on general building materials; also on road and manufacturing machinery, including equipment for phosphate mines, powerhouses, etc.

Cable (Electrical).—Baltimore (Md.) Board of Awards, City Hall.—Bids until Feb. 7 to furnish electrical cable to Park Dept.; specifications obtainable from Park Commrs., Druid Hill Park.

Carbon Machinery.—Walter O'Bannon, 1113 1/2 N. Harvey St., Oklahoma City.—To correspond with builders of machinery for producing carbon by burning natural gas.

Carpet, etc.—W. S. Craig, Navasota, Tex.—Floor covering of carpet or linoleum; to cover about 250 sq. yds. floor, Presbyterian Church. Send samples and prices.

Cars, etc.—Pennsylvania Equipment Co., Coleman Bldg., Philadelphia, Pa.—Two light passenger trail cars, standard wheel tread, 2-wheel truck, inside brake rigging, equipped with Baker heaters, of construction to permit of installation of radial draw bar; combination passenger and baggage car for West Virginia delivery; 40-ft. flat car, about 100,000 lbs. capacity; two turntables, 60 to 70 ft. long; all second-hand.

Cars (Dump).—General Utilities Co., 714 Paul-Gale-Greenwood Bldg., Norfolk, Va.—12 2-yd. 2-way heavy dump cars.

Cement.—See Paving Materials.—City of Clinton.

Chair Machinery.—White Oak Chair Co., Mount Gilend, N. C.—Will buy 80 H. P. boiler, 50 H. P. Corliss engine, lathes and other machinery to equip chair factory of 50 to 75 doz. daily capacity.

Chemical Machinery, etc.—Mont Color & Chemical Co., P. P. Brenner, Monticello, N. Y.—Catalogues of machinery for chemical, dye and intermediate manufacturing from coal tar.

Church Furnishings.—Rev. N. B. Wallace, Sturgis, Miss.—Prices on church pews (second-hand preferred if in good condition) and interior furnishings for \$1500 church.

Clay-working Machinery.—Harris Mfg. Co., Johnson City, Tenn.—Correspondence with manufacturers of machinery for preparing clay for paint making.

Conveyors.—See Mining Equipment, etc. Clinchfield Glass Sand Corp.

Cotton Machinery.—H. H. Luedicke, Pittsburgh, Tex.—Data and prices on machinery for spinning cotton yarn.

Cranes (Bridge, Electric Traveling).—Navy Dept., Bureau Yards and Docks, Washington, D. C.—Bids until Feb. 19 to furnish and install one 40-ton and four 10-ton bridge cranes at each of navy-yards.

Norfolk, Va.; Philadelphia, Pa., and Puget Sound, Wash.; plans and specifications (Spec. 2308) obtainable on application to Bureau or to commandants of navy yards named.

Crusher (Gyratory).—McCrossin Engineering Co., Contracting Engrs., American Trust Bldg., Birmingham, Ala.—No. 7, or 7½ or 8 gyratory crusher; prices f. o. b. Birmingham; delivery 4 to 6 weeks.

Crushed Granite.—See Feldspar.

Crushers, etc.—See Mining Equipment, etc.—Clinchfield Glass Sand Corp.

Crackers (Nut, Power).—J. R. Olivier, St. Martinville, La.—Addresses of manufacturers of power machinery to crack pecans and separate shells from kernels.

Crane (Traveling).—See Machine Shop Equipment.—Walls Frogless Switch & Mfg. Co.

Concentrating Mills (Zinc).—Lincoln Mining Co., Perry Anthony, Joplin, Mo., Mgr.—Prices on 75-ton mill.

Crusher (Coal), etc.—G. J. Adams, Consult. Engr., 39 South St., New York.—Second-hand coal crusher, Link-Belt or Jeffries; also 10-ft. vertical boring mill.

Dredge (Bucket).—Navy Dept., Bureau Yards and Docks, Washington, D. C.—Bids until Feb. 26 to furnish 1-ton bucket dredge for navy yard, Mare Island, Cal.; drawings and specifications (Spec. 2310) obtainable on application to Bureau or to commandant of navy yard named.

Dredging.—Iberia and St. Mary Drainage Dist., J. C. Akers, Prest., and Cypress Drainage Dist., C. P. Sims, V.-P., Jeanerette, La.—Bids at Citizens' Bank of Jeanerette until Feb. 5 to dredge 16,800 ft. 20-ft. canal, 98,500 yds.; 12,900 ft. 30-ft. canal, 140,000 yds.; 5900 ft. 40-ft. canal, 160,000 yds.; plans and specifications on file with Citizens' Bank of Jeanerette.

Drills.—Bureau Supplies and Accounts, Navy Department, Washington, D. C.—Bids until Feb. 13 for delivering twist drills, etc., at Navy aeronautic station, Pensacola, Fla. Apply for proposals to supply officer, Pensacola, or to Bureau.

Dyes Machinery.—See Chemical Machinery, etc.—Mont Color & Chemical Co.

Electric Cableway Hoist.—See Hoist, Easton Machinery Co.

Electric Crane.—W. B. Moore, City Clerk, Miami, Fla.—Bids until Feb. 15 for furnishing hand-power 15-ton capacity traveling crane for transfer warehouse; plans and specifications on file at offices of Isham Randolph & Co., Harbor Engrs., as follows: Suite 18, Real Estate Bldg., Miami; Suite 1310, Heard National Bank Bldg., Jacksonville, Fla.; Suite 1827, Continental Bank Bldg., Chicago, or may be secured at Jacksonville office.

Electric Plant.—A. L. Henson, Mayor, Panhandle, Tex.—Data and prices on electric-light plant; for 800 to 1000 population.

Electric-light Plant.—Dallas County, Chas. E. Gross, Auditor, Dallas, Tex.—Bids until Feb. 5 to install engine and generator unit for light plant in Criminal Courts Bldg.; plans, specifications and proposal forms on file with County Auditor.

Electric-light Plant.—Homestead, Fla., W. B. Caves, Town Clerk.—Bids until Feb. 5 to construct electric-light plant; information on application.

Electric Generator.—American Metallic Packing Co., Lexington, Ky.—Prices on first-class used 110 to 125 K. W. 250-volt D. C. generator, belted or direct connected to Corliss engine of size to operate full load with 90 lbs. steam pressure.

Electric Wiring, etc.—Methodist Church, Rev. Arthur Lazenby, pastor, care Fifth Avenue Hotel, Huntington, W. Va.—Bids until Feb. 8 for electric wiring, plumbing and steam heating for church and parsonage.

Electrical.—Navy Dept., Bureau, Supplies and Accounts, Washington, D. C.—Bids on 11 starter panels, Schedule 642, delivery Norfolk; 33 portable ventilating sets, and 45,000 ft. twin conductor wire, Schedule 656, and 75,000 ft. lighting and power wire, Schedule 652, delivery Brooklyn.

Electrical Specialties.—Naamlooze Vennootschap Technische Handel-Maatschappij vooheen Jan Mulder, Keizersgracht 422, Amsterdam, Holland.—Catalogs, prices, discounts, packing included, etc., for delivery f. o. b. New York of electric heating and cooking equipment, irons, etc.; pay cash New York; American references.

Engine and Generator.—See Generator (Electric).—Robt. R. Nixon, Co.

Excavation.—City of Rosebud, Tex., J.

R. Taylor.—Bids to excavate city reservoir; information on request.

Excelsior Machinery.—F. C. Parsons, Wadesboro, N. C.—Data on manufacture of excelsior, including kinds of wood, markets, etc.; also prices on machinery.

Engine (Corliss).—See Electric Generator.—American Metallic Packing Co.

Engine (Gas).—Missouri Mule Mining Co., W. A. Powers, Mgr., Miami, Okla.—Prices on gas engine.

Engine (Hoisting).—Jewel Supply & Equipment Co., 31 S. Calvert St., Baltimore, Md.—15 H. P. single-drum hoisting engine with boiler.

Engine.—See Chair Machinery.—White Oak Chair Co.

Feldspar.—C. V. Arnold, Tifton, Ga.—Correspondence with parties furnishing feldspar and crushed granite for facing cement brick.

Flooring.—Conway Bros., Texarkana, Ark.—Maple flooring for 12 two-story apartment-houses.

Foundry Equipment.—Vogt Bros. Mfg. Co., 14th and Main Sts., Louisville, Ky.—Machinery for boiler and pipe-fittings manufacturing departments.

Foundry Equipment.—Ballou Safety Rail Joint & Nut Co., C. E. Ballou, Mgr., 8

Grading, etc.—Park Commrs., Harry S. Smith, Secy., 602 Columbia Bldg., Louisville, Ky.—Bids until Feb. 5 to grade and drain Western Parkway from Broadway to Greenwood Ave.; grading Western Parkway from terminus of present construction at Gibson lane to Standard Oil Co.'s switch; construction concrete culvert under Western Parkway at Upper Paddy's Run; plans and specifications obtainable from Secy.

Grinding (Paint) Machinery.—Howard Maxwell, care American House, Trenton, N. J.—Equipment for paint grinding; new or second-hand.

Grits Mill, etc.—Robt. E. Lee, Farmers and Merchants' Bank Bldg., Lumberton, N. C.—Data and prices on machinery for meal and grits mills.

Hammer (Power).—See Machine Shop Equipment.—Walls Frogless Switch & Mfg. Co.

Heating.—See Electric Wiring, etc.—Methodist Church.

Heading Machinery, etc.—W. E. Small, Corinth, Miss.—Prices on heading machinery for sawing and turning tight-barrel stock; drykilns and trucks.

Hoist (Electric, Cable).—Easton Machinery Co., Drake Bldg., Easton, Pa.—Electric cableway hoist; 300 H. P., 550 voltage, A. C., 3 phase, 25-cycle; with cables towers,

Ill.; Titusville, Pa.; Waynesville, N. C.; copies of drawings and specifications obtainable at discretion.

Machine Tools, etc.—Bureau Supplies and Accounts, Navy Department, Washington, D. C.—Bids until Feb. 13, for delivering bars to connect rails; box, flat, and hopper cars; ferrochromium; frogs, switches, etc.; lathes, drilling, milling, and screw machines; magnet; armor plate; drill press; parallel rulers; screws; sextants; statorscopes spare parts for azimuth circles, etc.; rail, tracks and crossing; and steel castings and forgings at navy yard. Apply for proposals.

Machine Shop Equipment.—Walls Frogless Switch & Mfg. Co., 1112 Waldheim Bldg., Kansas City, Mo.—Prices on traveling crane, planers, drill press, hack saw (machine), power hammer, lathes, shafting, belting and motors.

Machine Tools, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on four 12-in. and 16-in. lathes; 30-in. drilling machine; vertical milling machine; screw, wire feed No. 2 machine; and 3-spindle drill press; all, Schedule 640, delivery Washington; also electrically-driven winding machine, Schedule 651, delivery Norfolk.

Machine Tools.—See Foundry Equipment.—Ballou Safety Rail Joint & Nut Co.

Machinery, etc.—Rodolfo Huber, Compostella 90-92 Ant., Habana, Cuba.—To represent American manufacturers of four-wheel steel cars to be attached to tractors; street cars with electric power; rails; new and second-hand machinery for sugar cane mills; boilers, crude petroleum furnaces or burners; cranes to feed the sugar-cane conductors; agricultural implements; hardware; aluminum ware; silks; cloth; fancy goods; leather; paper and board material; wool for gentlemen's suits; linen to make bed linen; embroideries; socks; cravats; paraffin soaps; raw materials for soap factories like resins; enameled iron goods; paper bags; gray boards; etc.

Manufacturers.—Evaristo J. Rodas, 102 Paseo de Gracia, Barcelona, Spain.—To represent manufacturers of: Aluminum and its products; nickel and its manufactures; cotton; waterproof textiles; artificial leathers; shoe leather; fancy leather, sole leather; rubber soles; writing and printing paper; rubber goods; fancy buckles; fine wood for making furniture; barrel staves; hardware in general and for household purposes; sheet rubber for manufacturers; steel in ingots; linen thread; silk and artificial silk thread; silk textiles and raw silk; hosiery of pure silk and of artificial silk.

Manufacturers.—Manuel Fraga, Montevideo, Uruguay.—To represent manufacturers of: Hardware; trimmings and all kinds of metal goods for furniture; hinges; handles; grips, etc., for furniture factories; dry goods in general; gold leaf, real and imitation; bronze powder.

Manufacturers.—W. G. Bladen, Glasgow House, Montserrat, B. W. I.—To represent manufacturers of: Dry goods (staple and fancy lines); boots, shoes; hardware, &c.

Manufacturers.—McHenry & Maguire, Clones, Ireland.—To represent manufacturers.

Merchandise.—The Herald Store, 24 Suffolk St., Charlestown, Georgetown Demerara, British Guiana.—Data and prices on men's, women's and children's hats, caps and ready-mades; boots and shoes; underwear, shirts, etc.; cottons, prints, oxfords, trousers, buttons, thread; haberdashery; millinery in general.

Meter (Gasoline).—Walter C. Baker, American Ball Bearing Co., Cleveland, O.—Meter to measure flow of gasoline through hose.

Metals, etc.—Navy Dept., Bureau, Supplies and Accounts, Washington, D. C.—Bids on 184 pairs angle splice bars to connect rails; frogs, switches, etc.; standard gauge rail, tracks and crossing, Schedule 639; sixty-six 51-caliber 4-in. and 5-in. liners; gun yokes (steel castings), Schedule 648; class B armor-plate, Schedule 647; twenty-six 14-in. yokes, mark IV, Schedule 638; all delivery Washington; also 18,500 lbs. steel bars, Schedule 652, delivery Brooklyn.

Millwork Supplies.—See Woodworking Machinery, etc.—Watts & Buell Furniture Co.

Mining Machinery.—See Building Materials, etc.—J. Rice Scott.

Mining (Coal) Machinery.—T. R. Ragland, Skelton, W. Va., Prest.-Mgr. Ragland Coal Co.—Prices on motors, cutters, motor generator set and pumps; for operation at mines, Pemberton, W. Va.

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ADDRESS: MANUFACTURERS RECORD, BALTIMORE, MD.

E. Campbell Ave., Roanoke, Va.—Bolt machines with continuous furnace; rolls for manufacturing angle bars; upsetting machines; gang drills; oil furnaces; oil tanks; tapping machines; shearing and punching machines; automatic screw machines; drill presses; belting; shafting; motors; etc.

Gasoline.—Panama Canal, Earl I. Brown, General Purchasing Officer, Washington, D. C.—Bids until Feb. 15 to furnish gasoline; annual estimate for period ending March 31; blanks, etc., relating to this circular (No 1118) obtainable from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from United States Engineer offices in principal cities throughout United States.

Generator (Electric), etc.—Robt. R. Nixon Co., 319 Hamilton National Bank Bldg., Chattanooga, Tenn.—125 to 150 K. W. 440-volt 3-phase 60-cycle A. C. generator, direct connected to engine.

Generator (Electric).—Grafton Light & Power Co., J. Clyde Lewis, Mgr., Grafton, W. Va.—Prices on 500 K. W., D. C. generator.

Generator (Electric).—Montezuma Light & Power Co., Montezuma, Ga.—Prices on 90 to 120 K. W., 2300 volt, 3 phase generator.

Generator Set.—See Mining (Coal) Machinery.—T. R. Ragland.

etc.; give full description and prices on cars; second-hand.

Huller (Peanut).—W. W. Baker, Baker Hill, Ala.—Interested in prices on peanut huller.

Ice Plant.—Corley Bros. Lumber Co., Lexington, S. C.—Data and prices on 10 ton ice plant.

Ice Plant.—Bagby Jewelry Co., Grayson, Ky.—5-ton ice plant.

Kiln (Dry).—Clark-Rhodes Lumber Co., Hamlet, N. C., or Richmond, Va.—Interested in prices on dry kiln, for probable installation at Hamlet, in near future.

Kilns (Dry).—See Heading Machinery, etc.—W. E. Small.

Lathe and Shaper.—National Milling Co., Macon, Ga.—Lathe and shaper.

Level (Spirit).—Independent Scale Co., Asheville, N. C.—Small spirit level in shape of T; for use on base of small counter scale.

Locomotives.—Jewel Supply & Equipment Co., 34 S. Calvert St., Baltimore, Md.—Two 9x14 36-in. gauge dinkies.

Lighting Fixtures.—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—Will open bids Feb. 16 to furnish and install lighting fixtures for following post-offices: Aurora, Neb.; Charles City, Iowa; Charlotte, N. C.; Falls City, Neb.; Hackensack, N. J.; Hornell, N. Y.; Opelika, Ala.; Seymour, Conn.; Shelby, N. C.; Taylorville,

Mining (Graphite) Machinery.—King Graphite Co., T. R. Bell, Prest., Lineville, Ala.—Prices on crusher, 2 sets crushing rolls, 3 electric motors, pump, 6-in. piping and 3 sets burr mills.

Mining Equipment, etc.—Cinchfield Glass Sand Corp., B. P. Barker, Secy., 115 N. 8th St., Richmond, Va.—Prices on mining, grinding and pulverizing plant to condition glass sand for market; also on carriers, tramways and conveyors for handling to loading station ½ mi. distant down steep incline.

Motor (Electric).—A. Greenberg & Son, 9 City Market, Danville, Va.—5 H. P. motor, with pulley attached; new or second-hand.

Motors (Electric).—See Foundry Equipment.—Ballou Safety Rail Joint & Nut Co.

Motor (Electric).—F. T. Parker Co., Columbia, S. C.—Second-hand 40 to 50 H. P. 40-cycle motor.

Motors (Electric).—National Milling Co., Macon, Ga.—Electric motors and transformers; second-hand, if in good condition.

Motors (Electric).—See Mining (Graphite) Machinery.—King Graphite Co.

Oil Refinery Equipment.—Home Refining Co., 615 Herskowitz Bldg., Oklahoma City.—Bids on oil refinery machinery; has purchased four 150 H. P. boilers; will close contracts March 1 on other machinery for complete refinery (petroleum products), 2500 bbls. capacity.

Packing Plant.—Orangeburg Packing Co., Orangeburg, S. C.—Bids until Feb. 15 to build packing plant; separate bids until Feb. 15 on erection of reinforced concrete and brick building and on complete equipment; plans and specifications from Wilson & Sompayrac, Architects, Palmetto Bldg., Columbia, S. C., or Packers' Architectural & Engineering Co., Manhattan Bldg., Chicago; \$25 deposit required.

Paving.—Committee on Public Works, Gustav Muller, Chrmn., Jacksonville, Fla.—Bids until Feb. 28 to pave sections of Forsyth St.; 18,746 sq. yds. bitulithic pavement on concrete base and 1514 sq. yds. vitrified block gutter on concrete base; proposal forms, specifications, etc., furnished by L. D. Smoot, Commr. of Public Works, Highway Dept., Main and Orange Sts.

Paving.—Baltimore (Md.) Board of Awards, City Hall.—Bids until Feb. 7 to pave with cement concrete alleys as listed in private Alley Contracts Nos. 20, 21, 22, 23 and 24; specifications and blank proposal sheets furnished on application to R. M. Cooksey, Highways Engr.

Paving.—City of Cocoa, Fla., A. L. Bruner, City Clerk.—Bids until Jan. 29 to construct hard-surfaced pavements and drains on certain streets; plans and specifications on file with City Council, Cocoa, and with C. M. Rogers, Engr., Cocoa and Daytona, Fla.; plans and specifications furnished by Engr. for \$3.

Paving Materials.—City of Clinton, S. C., S. W. Sumner, City Clerk.—Prices on sand, gravel, cement, etc., for cement sidewalks.

Piping, etc.—Eagle Pipe Supply Co., 30 Church St., New York.—Second-hand pipe and boiler flues; 2½ to 6 in.; carloads preferred.

Plows (Motor, Garden).—W. B. Ray, Box 57, Lucedale, Miss.—Data and prices on motor (or self-propelled) garden plow; or combined plow, seeder and cultivator, gasoline or kerosene (the latter preferred) power; for market gardening.

Plumbing.—See Electric Wiring, etc.—Methodist Church.

Power-house Equipment.—See Building Materials, etc.—J. Rice Scott.

Quarrying Machinery.—Enrique de Puig de Guito, Cortes 643, Barcelona, Spain. Catalogues of marble-quarrying machinery and equipment for washing granite.

Rails.—See Machine Tools, etc.—Bureau Supplies and Accounts.

Rails, etc.—General Utilities Co., 714 Paul-Gale-Greenwood Bldg., Norfolk, Va.—1500 ft. portable 20-lb. rails of 36-in. gauge.

Road and Bridge Construction.—Maryland State Roads Commission, 601 Garrett Bldg., Baltimore, Md.—Bids until Feb. 13 to construct following: 3.40 mi. concrete or oil-bound macadam road, Porter's Bridge to Rising Sun, contract No. 048, Cecil County; contract F-25, Frederick County, 5 mi. concrete or oil-bound macadam; contract Wo-12, Sec. 2, Worcester County, 2 duplicate bascule spans, 40 ft. clear, across Sinepuxent Bay, Ocean City; contract 0256, Sec. 2, between Kent and Cecil counties, bridge across Sasasfras River at Georgetown; specifications and plans on application.

Road Construction.—Clinton County Fiscal Court, K. G. Sloan, Clerk, Albany, Ky.—Bids until Feb. 9 to construct following roads: From Albany to Wayne County line, 11.23 mi., waterbound macadam surface; from Albany to Snow, 4.13 mi., 2 mi. waterbound macadam surface; from Albany to Tennessee line, 6.64 mi., grading only; approximate quantities: Earth excavation, 80,000 cu. yds.; rock excavation, 10,000 cu. yds.; concrete, 700 cu. yds.; macadam, 17,000 cu. yds.; plans and specifications on file with Commr. of Public Works, Frankfort, Ky., and County Clerk, Albany.

Road Construction.—Barbour County Court, Philippi, W. Va.—Bids until Feb. 20 to grade and construct 18.7 mi. macadam road and 12 concrete bridges, Barker Dist.; plans and specifications at office of S. F. Hoffman, County Clerk, Philippi.

Road Machinery.—See Building Materials, etc.—J. Rice Scott.

Safe.—See Bank Fixtures.—J. R. Fant.

Seales.—Hendersonville Laundry, Ice & Fuel Co., Hendersonville, N. C.—5-ton wagon scale.

Seating.—See Church Furnishings.—Rev. N. B. Wallace.

Seating.—Charles H. Elliott, 1328 E. 10th St., Kansas City, Mo.—Catalogues on seating for picture theater.

Seawall Construction.—City of Charleston, S. C., J. H. Dingle, City Engr.—Bids until March 1 to construct 1000 ft. of concrete seawall and for filling behind same; about 25,000 cu. yds. of material to be dredged from river; for information address Mr. Dingle.

Sewer Construction.—City of Tulsa, Okla., H. H. Wyss, City Engr.—Bids at office of City Auditor until Feb. 1 to construct sanitary sewers, including laterals, connections, etc., in Sewer Dist. No. 116; plans, profiles and specifications on file with City Engr.

Shingles.—C. V. Arnold, Tifton, Ga.—Correspondence with manufacturers of gravel-coated felt shingles.

Shovel (Steam).—Jewel Supply & Equipment Co., 34 S. Calvert St., Baltimore, Md.—Model 61 Marion steam shovel.

Soap Machinery.—Campbell-Humphreys, Talbot & Troise, Calle Salguero 290, Buenos Aires, Argentina.—Illustrations, prices, terms, conditions, approximate time of delivery after receipt of order, etc. on: cast-iron soap rollers; soap cutting machinery; soap stirring machinery; cast-iron soap moulds.

Steel, Chain, Pipe and Fittings, etc.—Panama Canal, Earl I. Brown, Gen. Purchasing Officer, Washington, D. C.—Bids until Feb. 19 on steel, chain, pipe, pipe fittings, nuts, washers, valves, cocks, chain blocks, tackle blocks, electric cable and wire, electrical attachments and fittings, transformers, graphite, muriatic acid, alcohol, carbon bisulphide, turpentine substitutes, castor, lard and lused oils; millwork, lumber, etc.; blanks, etc., relating to this circular (No. 1119) obtainable from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from United States Engineer offices in principal cities throughout United States.

Steel (Twisted).—Georgia Paving & Construction Co., 1722 Hamilton Ave., Columbus, Ga.—Quotations on 14,000 lbs. twisted steel, sizes ¼, ½, ¾ and 1-in., for use in construction of steel reinforced monolithic concrete silos.

Tile.—Walter E. Brown, Orlando, Fla.—Prices on ½x½x8-in. mantel tile and 6x6x1-in. terra-cotta tile.

Tile.—Conway Bros., Texarkana, Ark.—Tile for bathrooms of 12 two-story apartment-houses.

Tractor (Gasoline).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on gasoline tractor, with 6 trailers, Schedule 662, delivery Philadelphia.

Transformers.—National Milling Co., Macon, Ga.—Transformers and motors.

Trucks.—See Heading Machinery, etc.—W. E. Small.

Trucks (Gasoline; Trailer).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on gasoline 4-ton truck, and 2 trailer trucks, Schedule 663.

Turntables.—Pennsylvania Equipment Co., Coleman Bldg., Philadelphia, Pa.—Two second-hand turntables, 60 to 70 ft. long.—See Cars, etc.

Ventilating.—Charles H. Elliott, 1328 E. 10th St., Kansas City, Mo.—Catalogues on ventilators for picture theater.

Washing Machinery.—See Quarrying Machinery.—Enrique de Puig de Guito.

Water-works.—Bagby Jewelry Co., Grayson, Ky.—Data and estimates on water-works.

Water-works.—A. L. Henson, Mayor, Panhandle, Tex.—Data and estimates on water-works; for 800 to 1000 population.

Waste-disposal Plant.—City of Tulsa, Okla., Frank Newkirk, City Auditor.—Bids until Feb. 15 to construct waste-disposal plant; work to include erection of office and plant structures and installation of machinery, etc.; plans, specifications, etc., on file with City Engr., City Hall, and are obtainable for \$25.

Well-drilling.—E. S. Coates, Prest., Colonial Beach Gas & Oil Co., Colonial Beach, Va.—Bids on drilling 2500 ft. for oil.

Well-drilling.—Continental Oil & Gas Co., City Bank Bldg., Mobile, Ala.—To open bids March 1 for drilling 2 wells 3500 to 4000 ft. deep.

Wheels (Wood, Auto).—C. Allen & Son, Goodwater, Ala.—Addresses of manufacturers of wooden wheels for automobiles.

Wire (Bronze).—Chas. D. van Ryn, 4701 at 233 Broadway, New York.—Silicon bronze wire; details on application.

Windows (Stained Glass).—Jonesboro Supply House, Jonesboro, Tenn.—Stained glass memorial windows; some, hand painted.

RAILROAD CONSTRUCTION

RAILWAYS

Fla., Jacksonville.—Jacksonville Terminal Co. has invited bids for grading in connection with increased trackage for the new passenger station. J. B. Munson is Prest.

Ga., Rome.—Rome & Northern Railroad has let contract to B. M. Brewer of Rome, to build extension from Shackleton to Janet Mines, 2 mi.

Ky., Dawson Springs.—Survey is being made for proposed Illinois Central extension from Dawson Springs to Providence, Ky., 16½ mi., but it has not been definitely decided to build it. No bids asked yet. A. S. Baldwin, Chicago, Ill., is Ch. Engr.

Ky., Harlan.—Louisville & Nashville R. R. is surveying for a 10-mi. extension up Clover Fork; it also plans second track from Harlan to Corbin, Ky. H. C. Williams, Louisville, Ky., is Ch. Engr. of Construction.

La., Hornbeck.—J. S. Moore of Lufkin, Tex., is reported to have contract to build 11 mi. of railroad near Hornbeck for the Peavy Wilson Lumber Co. of Shreveport, and is shipping an outfit to the job.

La., New Orleans.—Trans-Mississippi Terminal Co. is reported planning new yard at Westwego, near New Orleans, at probable cost of \$250,000. J. A. Shepard is Prest. and Gen. Mgr. and F. A. Mote Engr.

Md., Baltimore.—Pennsylvania R. R. Co. has submitted new plans for proposed general improvements at Baltimore to cost between \$12,000,000 and \$15,000,000, including new Calvert Station and yards, additional double-tracked tunnels both north and south of Union Station, altogether between 2 and 2½ mi. of tunnel construction, besides other extensive work. Ordinances to be introduced in City Council. G. Latrobe, Wilmington, Del., is Gen. Supt., and G. R. Sinnickson, Baltimore, is Supt.; J. C. Auten, Prin. Asst. Engr., Wilmington, Del.

Md., Baltimore.—Washington, Baltimore & Annapolis Electric Railway contemplates making improvements to its terminals on Pratt St. J. J. Doyle is Vice-Prest. and Gen. Mgr.

Md., Ocean City.—Ocean City & Fenwick Island Ry. Co. will build 8 mi. electric line straight up the beach, one block from the ocean, to Fenwick Island. Thomas E. O'Connell of Phoenixville, Pa., is the contractor. Inceptors: C. Edward Shute, B. Frank Wagamon, W. B. S. Powell and Henry T. Moore, all of Ocean City, and Sherman E. Ayars, 308 Perry Bldg., Philadelphia. Officers and directors: W. B. S. Powell, Prest.; Harry J. Cropper, V.-P.; Frank W. Truitt, Treas.; C. Edward Shute, Secy.; Thos. E. O'Connell, Ch. Engr.

Miss., Gulfport.—Construction is reported begun on the branch of the Gulf & Ship Island R. R. from Hovey to Kiln, Miss., about 20 mi.

Mo., Bowling Green.—Chicago & Alton R. Co. contemplates building 25 mi. of second track from Bowling Green to Curryville, Mo., and from Francis via Mexico to Cen-

tral, Mo., this year, but the work is not yet authorized. H. T. Douglas, Jr., Chicago, Ill., is Ch. Engr.

Mo., Dewitt.—Contract let by the Wabash Ry. Co. to P. J. Hannan Co. of St. Louis is to build 2½ mi. (not 5 mi. as stated in a press report) near Dewitt to get away from the Missouri River. Estimated total cost, \$75,000. A. O. Cunningham, St. Louis, is Ch. Engr.

N. C., Asheville.—J. E. Barrow is reported to have begun survey for the proposed Gumberry, Ahoskie & Windsor Railroad between Gumberry and Ahoskie, 30 mi.

N. C., Asheville.—Southern Ry., it is reported, will build second track from Craggy, near Asheville, to Leadvale, Tenn., about 70 mi., including a cut-off from Bulls Gap to Leadvale, and some other revision of line. W. H. Wells, Washington, D. C., is Ch. Engr. of Constr.

N. C., Canton.—Champion Fiber Co. of Canton is said to contemplate construction of railway from Cherokee Indian School up the Oconolufee River, 7 mi., to a connection with the Murphy branch of the Southern Ry. near Whitlitt, N. C., to develop timber lands.

N. C., Cherokee.—Appalachian Ry. contemplates building extension from Cherokee to Seph, 4 mi. W. J. Parks, Newport, Tenn., is Gen. Mgr.

N. C., Greensboro.—Carolina & Yadkin River Ry. proposes to extend from High Point northeast to Greensboro, 15 mi., provided that \$200,000 be subscribed to stock. E. C. Deal, Greensboro, is V.-P. and Ch. Engr.; B. S. Coler, 43 Cedar St., New York, is Prest.

Okla., Claremore.—St. Louis, Iron Mountain & Southern R. R. (Missouri Pacific System) is reported considering plans to build a branch from Claremore, or near there, to Tulsa, about 25 mi. E. A. Hadley, St. Louis, Mo., is Ch. Engr.

Okla., Enid.—Enid & Northwestern R. R. Co., capital stock \$200,000, is chartered to build a line from Fairmont to Bliss, Okla., 35 mi., and later an extension from Bliss to Tonkawa, about 10 mi. Estimated cost, \$400,000. Incorporators: J. A. Frates of Springfield, Mo.; J. A. Frates, Jr., of Dilworth, Okla.; Wm. Matthews, Fort Scott, Kan.; J. H. Grant and Jack Jones of Oklahoma City, Okla. Mr. Matthews is Ch. Engr.

S. C., Rock Hill.—Construction of a railroad from Rock Hill to connect with the Seaboard Air Line is proposed by the Chamber of Commerce, and \$20,000 of bonds are to be issued as soon as permission from the Legislature is obtained.

Tenn., Coalmoat.—The extension of the Nashville, Chattanooga & St. Louis Ry. from Coalmoat to proposed mines of the Tennessee Consolidated Coal Co., 12½ mi., will be built by the company's forces; none of it will be let.

Tex., Dallas.—Dallas Northwestern Traction Co., E. P. Turner, Prest., which proposes to build an electrical interurban railway from Dallas via Denton to Slidell, Tex.,

38 mi., has, it is announced, closed an underwriting contract for sufficient bonds to build the road. Two routes have been surveyed and rights of way contracts will now be closed.

Tex., Temple.—Estimated cost of the projected Temple-Marlin interurban railway is \$450,000, according to an official report. It will be 33 mi. long from Temple via Belfells, Durango, and The Falls to Marlin. S. D. Hanna is Ch. Engr. and Supt.

Va., Winchester.—Winchester & Western Ry. Co., under construction from Winchester to Wardsville, W. Va., 40 mi., has elected officers and directors thus: W. B. Cornwell, Pres.; Herbert Larrick, Vice-Prest.; both of Winchester; W. M. McClaine, Secy. and Treas., Romney, W. Va.; Robert M. Ward, Atty., and A. C. Slonaker, both of Winchester; George C. Snyder of Hagerstown, Md., and J. F. Zimmerman of Romney. Inter-Mountain Construction Co. has contract to build the road, on which between 4 and 5 mi. have been graded. Line to be completed in 15 months.

W. Va., Clarksburg.—Baltimore & Ohio R. R. is investigating preliminary. It is said, to building a branch up Elk Creek from Clarksburg, 20 mi. R. N. Begien, Baltimore, is Ch. Engr.

W. Va., Flemington.—Baltimore & Ohio Railroad contemplates building branch from Flemington to mines of the Simpson Creek Coal Co., several miles. R. N. Begien, Baltimore, is Chief Engr.

STREET RAILWAYS

Md., Takoma Park.—Washington & Maryland Ry. Co. will extend its lines in Takoma Park, connecting with the Capital Traction Co. of Washington, which will operate them. Estimated cost about \$66,000.

N. C., Durham.—Piedmont Electric Co. of Burlington proposes, it is reported, to build a short extension to Elon College.

Book Reviews.

Manual for Engineers. Compiled by Chas. E. Ferris, B.S., Professor of Mechanical Engineering, University of Tennessee. Published by the University Press, Knoxville, Tenn. Leather-bound, vest-

pocket size. 220 pages. Price 50 cents.

This, the twentieth edition, is published with the idea of compiling information, data, tables, etc., most likely to be needed by the engineer and business man, for the purpose of bringing before the minds of the men who control the affairs of the South the strongest possible arguments in favor of technical education as a means of developing the resources of the country. Material has been drawn from manufacturers' handbooks, books for engineers, from the publications of the university professors and other sources in securing the matter contained in the book.

Income Tax, Law and Accounting. By Godfrey N. Nelson, 52 Broadway, New York, Certified Public Accountant, Member of New York Bar. Published by the author. Cloth bound, 210 pages. Price \$1.

The book's primary purpose may be briefly stated as being to obviate the necessity of analyzing and rearranging accounts and to facilitate the preparation of individual and corporation income tax returns. Rulings of the Treasury Department and court decisions on the most important items of income and expenses have been included to render the book more useful. However, no intention was exercised by the author to make this a law book. Rather it is meant merely for the purpose of a practical guide in preparing returns. Statements made in the book are based, first, on the income tax law enacted September 8, 1916, which was retroactive and took effect as of January 1, 1916; second, on rulings by the Treasury Department thereon; third, on such rulings and court decisions under the excise tax of 1909 and the income tax law of 1913 that are consistent with the requirements of the present law.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Birmingham Manager Appointed.

L. G. Haller has been appointed manager of the Birmingham office at 715 Brown-Marx Bldg. of the Walsh & Weldner Boiler Co., Chattanooga, Tenn., manufacturer of boilers, structural steel, tanks.

Change of Address.

The Crain Engineering Co., Inc., construction, financing and managing engineer, Baltimore, announces that in order to obtain more spacious quarters it has moved from its former offices in the Maryland Casualty Bldg. to the Garrett Bldg.

Moves Plant.

The Oldroyd Mfg. Company of Knoxville, Tenn., manufacturers of coal mining machinery has moved its plant to 227 Florence Ave., Cincinnati, Ohio, but is retaining its main office in Knoxville in charge of C. S. Oldroyd, vice-president and general manager.

One-Car Asphalt Plants.

The following concerns have recently bought Merriman one-car asphalt plants from the manufacturer, the East Iron & Machine Co., Lima, Ohio: H. G. Goelitz Co., Oak Park, Ill.; Columbus Paving Co., Columbus, Ohio; Andrews Paving Co., Hamilton, Ohio.

Mail Order Business Established.

The Universal Supply Co., Grayson, Ky., J. T. Stephenson and J. W. Lusby, Props., has entered the mail order business, handling buggies, wagons, farm implements, household goods, furniture, etc., and expecting to cover the South.

Pulsometers in Demand.

Business for January, of the Pulsometer Steam Pump Co., Irvington, N. J., according to a report of U. J. Berow, Secy., exceeded, by many thousands of dollars, that of any other month in the history of the company. Pulsometer steam pumps now are in the greatest demand the company has known.

Facilities As Timber Factors and Estimators.

The firm of Sanborn & Gearheart, American National Bank Bldg., Asheville, N. C., timber factors and estimators, specialists in international timber land investigations, is composed of two men of wide experience in the work designated. C. A. Sanborn began his twenty-three years' experience in Saginaw, Mich.; spent five years on the Pacific coast, seven dealing in Southern yellow pine, mostly at Mobile, Ala., and Moss Point, Miss., followed by four years in Central America and Mexico, the last two and a half years having been spent in the United States in such work as that in which he is now engaged. Paul H. Gearheart, a graduate of the Baltimore Forestry School, spent a year estimating timber for the Canadian Pacific Railroad, followed by two years' mill and woods work in Louisiana, since which for the past eight years he has been estimating, with Asheville as headquarters.

New Cement Plant at Roanoke.

The Universal Cement Products Co. of Norfolk, Va., has recently established a five-machine plant at Roanoke, Va., for the manufacture of the well-known brand of

cement roofing—Cementile. The company has been awarded two contracts for the roofing of the Seaboard Air Line Railway Co.'s new stations at Manatee, Fla., and Emory University, Atlanta, Ga.

Takes Commodious Quarters.

A handsome pamphlet has been sent out by W. L. Stayton & Co., Toledo, O., bond dealer, announcing the removal of its office to the Dime Savings Bank Bldg., occupying the entire third floor. Interior views of the new business home appear very inviting. Out-of-town customers are invited to make it their headquarters while in Toledo. In the equipment and arrangement provision is made for the safe, prompt and efficient handling of business.

Open Architectural Office in El Paso.

Lang & Wittichell, architects, Dallas, Tex., have established an office at 703-4 First National Bank Bldg., El Paso, Tex., under the management of C. E. Barghaugh. This is a well known architectural firm, Mr. Lang, aside from strictly architectural work, having been prominent of late in the position of Commissioner of Streets and Public Property of Dallas, where he has directed great improvements.

Berger Company Appointments.

Announcement is made by the Berger Manufacturing Co., Canton, O., of several recent appointments. R. W. Van Horn, previously with the New York branch, has been transferred to the home office, in charge of the building material products division; Norman A. Hill, recently efficiency engineer for E. I. du Pont de Nemours & Co., Wilmington,

Del., appointed to that position at the home office and factory; P. V. Stonerod, head of the sidewalk light department; A. H. Bromley, chief engineer of sales department.

To Manufacture Refrigerating Machinery.

Vogt Bros. Manufacturing Co., Inc., Louisville, Ky., purchaser of the entire business of the Huettman & Cramer Co., formerly manufacturer of refrigerating and ice-making equipment, states that it is now about ready for business. Foundations are being put in for the new boiler and pipe-fitting department, to be completed in 40 working days. Notice is sent to H. & C. equipment users that repairs, supplies and complete refrigerating and ice-making plants of any capacity will be furnished of quality and workmanship to uphold the reputation of the product.

New Chamber of Commerce Officers.

At the annual meeting of the Gastonia (N. C.) Chamber of Commerce, held recently, the following officers were elected: President, J. H. Lipark; First Vice-President, A. G. Myers; Second Vice-President, S. A. Robinson; Treasurer, W. H. Adams; Director of Department of Finance and Organization Affairs, S. M. Boyce; of Industries, C. B. Armstrong; of Publicity, J. H. Kennedy; of Civic Affairs, J. M. Holland; Mercantile Affairs, U. B. Morris; Traffic and Transportation, F. D. Barkley; Conventions and Public Affairs, T. L. Craig. C. W. Roberts and S. A. Ferguson are Secretary and Assistant Secretary, respectively.

[Continued on Page 97.]

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ala., Clanton.—Southern Securities Co., capital \$300, incptd. by C. C. Covington, Lamar Aldridge and M. P. Randall.

Ala., Guntersville.—A national bank, capitalized at \$50,000, is organized with the following directors: T. B. Albert, Pres.; M. F. Irvine, Cash.; J. L. Henry, John A. Lusk, Gordon Gilbreath, David Jordan.

Ala., Ozark.—Co-operative Farm & Land Co. incptd.; authorized capital, \$30,000; M. A. Smith, Pres.; J. D. McFadden, V.-P., and H. O. Dowling, Secy. and Treas. Business has begun.

Fla., Tampa.—Morris Plan Co., capital \$50,000, is being organized by J. A. Griffin, Collins Gillett, Frank Bentley, W. G. Brorein, F. D. Jackson, J. M. Harvey, W. B. Gray, Giddens E. Mabry and Doyle Carlton.

Ga., Colquitt.—Colquitt Exchange Bank chartered; capital \$40,000; incorporators, S. M. Watson, Joe M. Shingler, F. E. Fudge, Jr., and others.

Ga., Cordele.—The Exchange Bank and the Cordele National Bank of Cordele have merged under the name of the former institution.

Ga., Gainesville.—Gainesville Securities Company, capital \$30,000, has made application for charter. Petitioners: Felix Jackson, Mrs. L. W. Jackson and J. H. Washington.

Ga., Macon.—Bibb National Bank has begun business; capital \$200,000; L. P. Hillyer, Pres.; E. J. Williamson and T. R. Turner, V.-Ps.; A. H. Stewart, Cash.; H. P. Beilinger, Asst. Cash.

Ga., Savannah.—A new bank with capital of \$100,000 or \$150,000 is being organized by A. Razun, J. Lichtenstein, B. Weitz, I. Silver, A. Blumberg, William Marcus and others.

Ga., West Point.—Citizens' Savings Bank chartered; capital \$25,000. Directors: Geo. H. Lanier, Chrmn. of Board; G. A. Avery, Pres.; O. G. Murphy, M. M. Hunt, E. G. Cook, L. Lanier, G. S. Cobb, J. H. Stockhill, I. B. Morris and others.

Md., Baltimore.—J. Monroe Holland and others are planning to organize a financial company to aid commercial enterprises.

N. C., Williamston.—People's Bank, authorized capital \$100,000, is organized by J. G. Blaton, C. H. Godwin, William Blade, J. W. Whitaker and others.

N. C., Winston-Salem.—Plans are being made to organize a Morris Plan Bank. Those interested are A. A. Meyers, J. Frank Morris and R. M. Hanes.

Okl., Dilworth.—Dilworth State Bank, capital \$15,000, is incptd. by C. A. Gwinn, Newkirk; W. E. Carey, Dilworth; F. R. Zacharias, Enid.

Okl., Okmulgee.—Central National Bank

has made application for charter; capital \$100,000; surplus \$10,000. Incptrs.: T. J. Baker, W. A. Stuart, Tom Payne, Waite Phillips and D. M. Smith.

Okl., Sulphur.—Farmers' National Bank has made application for charter; capital \$50,000. Organizers: J. R. Fant, James O. B. Beckham, B. A. Nelson and John A. Haste, Cash. Business is to begin as soon as charter is granted.

S. C., Andrews.—Andrews Mutual Building and Loan Assn. is incptd.; capital \$100,000; incorporators, E. L. Powell, H. S. Parsons, D. L. Moyd. Business is to begin Feb. 15.

S. C., Blackville.—Commercial Bank of Blackville will begin business about Feb. 1; capital \$25,000; A. M. Denbow, Pres.; C. J. Fickling, V.-P., and C. W. Rentz, Jr., Cash.

S. C., Charleston.—Charleston Perpetual Building and Loan Assn. incptd.; capital \$50,000 to \$100,000; incorporators, Joseph E. Jenkins and Hawkins K. Jenkins. Business is to begin Feb. 1.

S. C., Darlington.—Darlington Building and Loan Assn. is chartered; capital \$50,000; H. Hyman, Pres.; C. C. Vaughan, V.-P., and W. C. Edwards, Secy. and Treas.

S. C., Dillon.—Dillon Mutual Building and Loan Association has been granted a commission; capital \$120,000. Petitioners: G. G. McLaurin, J. M. Sprunt, LeRoy Williams, J. V. Malcolm, A. B. Jordan, J. E. Bethea, J. H. Hamer and J. P. Lane.

S. C., Fort Motte.—Bank of Fort Motte has been granted a commission; capital \$15,000. Petitioners: W. G. Peterkin, J. G. Maynard and J. P. Crouch.

S. C., Winnsboro.—Fairfield Loan Co. incorporated; authorized capital \$40,000. Business is to begin about Feb. 15. Officers not yet elected. J. W. Carthart and others are interested.

Tenn., Elizabethton.—Holston National Bank has made application for charter; capital \$25,000.

Tenn., Murfreesboro.—Citizens' Bank & Trust Co., capital \$15,000, is incptd. by W. H. Starnes, J. M. Crigger, W. S. Turnage, J. W. Corbitt, G. P. Clements and S. H. Bass.

Tex., Alvin.—Farmers' State Bank incptd., capital \$25,000; surplus \$6250. W. P. Davis, Pres.; B. T. Higginbotham, V.-P.; M. N. Wellborn, Cash. Business began Jan. 10.

Tex., Dallas.—American Bond & Mortgage Co. is chartered; capital \$50,000. Incptrs.: L. A. Casey, Dallas; R. A. Richey and P. E. Gragg, San Antonio.

Tex., El Paso.—Border National Bank has made application for charter; capital \$100,000.

Tex., Hemphill.—State Guaranty Bank, chartered; capital \$10,000; J. W. Minton, Pres.; W. C. Bell, Cashier. Directors: H. B. Arnold, J. Knouse and R. H. Minton. Business has begun.

Diversified Resources of Rome, Ga., As Basis for Broad Development

By T. E. GRAFTON, Secretary Rome Chamber of Commerce.

Rome is located within the triangle formed by Atlanta, Chattanooga and Birmingham. The distance from Rome to Chattanooga is 70 miles, to Atlanta 70 miles and to Birmingham 120 miles.

The topography of the country around Rome is similar to that of Pittsburgh, Pa., and vicinity. The Oostanaula and Etowah rivers meet at Rome and form the Coosa-Alabama River, which winds its way by way of Gadsden, Montgomery and Selma to Mobile, where it flows into the Gulf of Mexico.

The Oostanaula River above Rome is navigable for a distance by river of 110 miles. South of Rome the Coosa-Alabama River is navigable for a distance by river, to a point below Gadsden, 125 miles; then come the rapids and falls at Wetumpka. From Montgomery to Mobile the river is open.

A report by Captain, now Major, H. B. Ferguson of the United States Army Engineers, published in 1913, has brought many interesting facts to light in regard to this area that are worth investigation by anyone who contemplates the establishment of an industrial enterprise in a section where natural resources, power, climate and transportation are found in combination.

The following table is taken from the report referred to:

"The annual production of the upper Coosa-Alabama Valley, though still in its incipency as compared with the natural resources of this region, is as follows:"

	Tons.	Value.
Cotton.....	55,165	\$13,239,000
Cottonseed.....	110,330	2,206,600
Grain.....	409,725	9,105,000
Cattle, sheep and hogs.....	25,000	1,000,000
Cotton-mill products.....	56,430	22,015,000
Other manufactured products.....	1,536,400	52,651,000
Iron ore.....	1,750,000	2,625,000
Other minerals.....	50,000	150,000
Lime.....	750,000	525,500
Marble, 120,000 cubic feet....	10,800	420,000
Coal.....	520,000	780,000
Coke consumed.....	814,000	1,628,000
Timber cut.....	555,750	2,006,000
Cement, 475,000 barrels.....	95,000	475,000
Fertilizers.....	67,000	1,340,000
Brick (paving).....	225,000	900,000
Iron and steel products.....	992,000	14,885,000
Total.....	8,022,600	\$125,921,700

The report further shows that, in addition to offering a magnificent artery for navigation, the Coosa River is capable of developing 222,000 horsepower from its headwaters to Montgomery, Ala.

A recent report by Dr. McCallie, the State Geologist, shows that there is workable red ore in Northwest Georgia to the extent of 225,000,000 tons. It also states that there is between 75,000,000 and 125,000,000 tons of brown ore. Limestone and dolomite exist in unlimited quantities. Manganese, barytes and ochre are important items of export.

There is a splendid opportunity at Rome for any industry that uses these materials in any form.

Rome at the present time is a very successful producer of furniture, agricultural implements, stoves, trucks and wheelbarrows, hosiery, and is a large manufacturer of cotton goods. There is plenty of room for further development along any of these lines.

AGRICULTURE.

It came to the notice of the directors of the Rome Chamber of Commerce that Rome and Floyd county were importing packing-house products, corn, cornmeal, hay, oats, flour, peas, mules and horses to the extent of \$1,391,013 annually.

Commercial fertilizers, wheat, hogs, beef, mutton, butter, eggs, chickens potatoes, fruits, nuts and dairy products were not specified in the foregoing list of imports. All these however, are known to be among the natural products of Floyd county. They can be produced easily throughout this section.

The committee having the compilation of this data in charge estimated that this additional list of products brought into Floyd county that might have been produced around Rome amounted in value to approximately \$200,000, making a total value of all imports, as enumerated, into the county of \$1,591,013.

It was found that there was produced in Floyd county for the corresponding period (1914) 23,500 bales of cotton. This was a fairly large crop, sold at good prices, and valued at \$1,529,500.

From the foregoing it appears that the returns from the cotton crop of the year 1914 lacked \$61,513 being enough to pay for the farm products shipped into Floyd county during that year.

The farmers of Floyd county constitute half the population of the county, and while they did not consume half the products shipped into Rome, they no doubt consumed a very large part of them. In other words, here is a splendid opportunity for progressive farming.

The only explanation given by the committee having this matter in charge was the simple statement

able prices, and there is a splendid market at all times, not only at Rome, but in the surrounding cities of Chattanooga, Birmingham and Atlanta as well, for farm and dairy products of every kind and description.

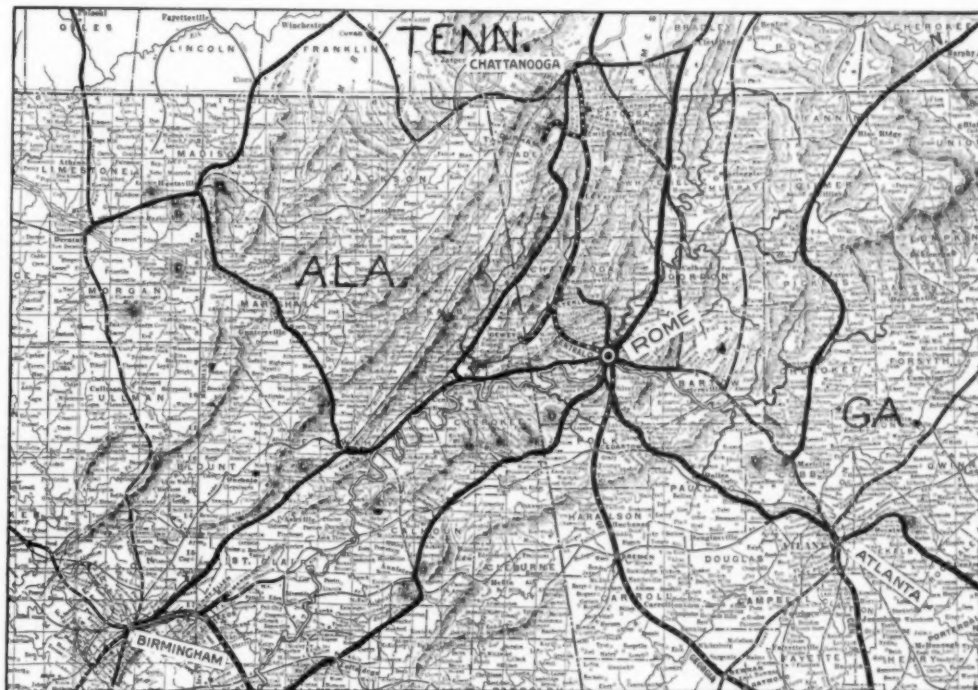
The winters are mild, permitting outdoor work the year around, and the summer heat is rarely oppressive.

Rome has a splendid system of public schools, and in addition to that is the home of Shorter College, a magnificent institution for advanced instruction for females, and of the Darlington School, a splendid preparatory school for boys.

The famous Martha Berry School, that is doing such a splendid work in educating the mountain youth, both male and female, is located just one mile from Rome.

Rome has recently completed a magnificent fire-proof City Hall and Auditorium that is one of the finest buildings of its kind in the South.

Of recent years the city of Rome has attracted wide attention as a highway center, and its hotel



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that the farmers of Floyd county evidently were of the opinion that it pays to make cotton and buy their food products with the proceeds of the cotton. This, of course, is a great error, hard on the farm and pocketbook alike, and we have been steadily working to correct it. In this work, it is pleasing to state, the farmers have generally co-operated fully.

The figures, however, show that Rome is a splendid market, over \$1,500,000 being sent out of the county for farm products, in addition to those raised in the county itself.

The result has been that the people of this section are being awakened to the potential agricultural possibilities of Northwest Georgia, and are slowly but surely entering into an era of progressive farming and stock raising that in a short time, it is believed, will justify the hopes of those who have undertaken this work. We will gladly welcome and assist to locate any successful farmers who might be attracted by a milder climate and the inducement offered to make money out of improved land as well as on their products.

Not over 30 per cent. of the lands in this section are under cultivation. There is an excellent opportunity to acquire good land in this section at reason-

facilities afford delightful entertainment for the commercial man or tourist. Splendid roads lead from here to Chattanooga and Atlanta over the Dixie Highway, and from Rome to Birmingham, Montgomery and Pensacola over the Forrest Highway.

There are three national banks and two State banks in Rome, which the prospective business man will find ready and willing to co-operate with him in any industrial enterprise that they consider worthy of confidence and merit.

We who live here believe that the future of Rome as a very important commercial center is assured, and we base that belief on what has already been done, on the natural resources we possess, on the adaptability of our lands for agricultural and stock-raising purposes, upon our lines of transportation both by railroad and water, upon our freedom from destructive storms and tornadoes on account of the surrounding mountains, and, finally, upon our citizenship, which is eager to assist in developing this section and to see a land of potential plenty come into its own, in the center of which we hope to build a more splendid city as the crowning efforts of our ambitions.

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Total Resources
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Tex., Martindale.—Martindale National Bank is chartered to succeed the Merchants and Planters' Bank; capital \$50,000. J. B. Martindale, Pres.; R. N. Martindale, V.-P., San Antonio, Tex.; C. N. Martindale, V.-P., Maxwell; F. P. Johnson, Cash., and F. W. Slaughter, Asst. Cash., Martindale. Business has begun.

Tex., Oplin.—First State Bank chartered; capital \$10,000. Tom Windham, Pres.; G. O. Cresswell, V.-P.; Ben Allen, Cash. Business has begun.

Tex., Tehuacana.—Citizens State Bank of Tehuacana is organized with \$10,000 capital. W. M. Moody, Pres.; John Sweat of Mexia, V.-P.

Tex., Wingate.—Wingate Banking Co. (a private concern), Main St., organized with liabilities of \$250,000. Those interested are Dr. J. W. Dixon, Wingate; John I. McAdams, Winters.

Va., Courtland.—Bank of Southampton, capital \$15,000 to \$50,000, is organized with H. B. McLemore, Pres.; O. M. Joyner, Secy.

Va., Norfolk.—The new \$1,000,000 bank and trust company being organized by the Eastern Finance Corporation will be known as the Norfolk Bank & Trust Co. Thos. J. Powell will be Pres., and J. H. Du Val, Secy.

Va., Shawsville.—Southern Trust Co. Incptd.; capital \$100,000; J. L. Vaughan, Pres.; S. C. Snead, Secy. and Treas.; H. J. Phlegar, V.-P. Business is to begin about Feb. 4.

W. Va., Bluefield.—Commercial Bank, capital \$100,000, has begun business in the Law and Commerce Bldg., 110 Federal St. Bernard McLaugherty, Pres.; Rufus A. Hale, V.-P.; W. C. Given, Cash.

W. Va., Davis.—People's Bank of Davis has begun business; capital \$25,000. J. H. Fisher, Pres.; Warren Bowers, V.-P., and C. G. Lashley, Cash.

NEW SECURITIES

Ala., Collinsville.—(School).—\$10,000 of school bonds have been sold. W. A. Wilbanks is Town Clerk.

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Ala., Decatur.—(Road).—Steps are reported being taken in Morgan County to vote on bonds. Address Chrmn. Board County Commissioners.

Ala., Tuscaloosa.—(Wharf).—Election is to be held Mch. 5 to vote on \$50,000 of 5 per cent. 30-year bonds. Address The Mayor.

Ark., Little Rock.—(Notes).—Legislature is working on a bill to authorize an issue of notes to amount of \$750,000, bearing 5 per cent., to pay State debt. Address T. J. Terrel, Secy. of State.

Ark., Washington.—(Drainage).—Bids will be received until 1 P. M. Feb. 15 at the office of Etter & Monroe for \$56,000 of 5½ per cent. 1-16-year \$500 denomination bonds Ozark Drainage Dist. No. 2, Hempstead County.

Fla., Fort Myers.—(Road, Bridge).—Bids will be received until 2 P. M. Feb. 5 for \$190,000 of 5 per cent. \$500 denomination bonds, dated Jan. 1, 1917, and maturing Jan. 1, 1918 to 1948. J. F. Garner is Clerk Board of County Commrs.

Fla., Fort Pierce.—(Street Warrants).—Bids opened Feb. 1 for \$10,000 of 6 per cent. 1-10-year \$500 denomination time warrants for street construction. W. R. Jackson is City Clk. and F. L. Hemmings City Atty.

Fla., Howey.—(School).—Steps are being taken to issue \$10,000 of Howey School Dist., Lake County, bonds. Address County Commrs. at Tavares.

Fla., Mayo.—(Road, Bridge).—\$250,000 of Lafayette County bonds are voted. Address County Commrs.

Fla., Tarpon Springs.—(Water, Sewer, Street, Parkway).—\$15,000 water-works, \$15,000 sewer and \$7500 street and parkway improvement bonds are voted. Address The Mayor.

Ga., Atlanta.—(Warrants).—\$1,500,000 of 1-year Georgia School warrants have been awarded at par with 3½ per cent. discount to the Guaranty Trust Co., New York.

Ga., Ellaville.—(School).—Date for opening bids for \$12,000 of 6 per cent. \$1000 denomination bonds Ellaville School Dist., Schley County, is postponed from Jan. 22 until 10 o'clock Feb. 5. C. R. McCrory is Clerk; dated Jan. 1, 1917; maturity Jan. 1, 1943.

Ga., Jackson.—(School).—Question of issuing school bonds is under consideration. J. H. Ham is Pres. Board of Education.

Ky., Carrollton.—(School).—\$25,000 of bonds Carrollton Grade School Dist. No. 1, in Carrollton, Carroll County, are voted. J. P. Wheeler, C. A. Hill, G. W. Johnston, J. L. Tharp and J. W. Harrison, Trustees.



Ky., Covington.—(Funding).—\$140,000 of 4 per cent. bonds have been purchased by Field, Richards & Co., Cincinnati, for \$141,003.34 and interest.

Ky., Murray.—(Light, Water).—Bids will be received until noon Feb. 12 for \$20,000 of 5 per cent. 5-30-year \$500 denomination bonds. C. M. Smoot is City Clerk. Further particulars will be found in the advertising columns.

La., Alexandria.—(Road).—Bids will be received until noon Feb. 27 for \$56,000 of 5 per cent. bonds Road Dist. No. 12, Rapides Parish. R. H. Jackson is Pres. Board of Suprs.

La., Amite.—(Road).—\$100,000 of 5 per cent. \$500 denomination bonds Road Dist. No. 4, Tangipahoa Parish, have been purchased at \$1273 premium by Hibernia Bank & Trust Co., New Orleans.

La., Donaldsonville.—(Levee).—Bids will be received until 11 A. M. Feb. 27 for \$150,000 of 5 per cent. 5-10-year \$500 and \$1000 denom-



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nation bonds Lafourche Levee Dist. C. C. Weber is Secy. Bd. of Commrs.

La., Independence—(Water-works).—\$22,000 of bonds have been purchased at par by the Farmers & Merchants' Bank of Independence.

La., Independence—(Water).—\$22,000 of bonds have been purchased at par by the Farmers & Merchants' Bank of Independence.

La., Jeanerette—(Drainage).—Bids will be received until 10 A. M. Feb. 5 for \$240,000 of 5 per cent. \$100 denomination bonds of sub-drainage Dist. No. 3 of the Iberia and St. Mary Drainage Dist. and \$140,000 of 5 per cent. \$100 denomination bonds Cypremont Drainage Dist., maturing June 1, 1918, to June 1, 1952, inclusive. J. C. Akers is Prest. of the Iberia and St. Mary Dist. and C. P. Sims, V.-P. of the Cypremont Drainage Dist.

La., Lafayette—(Sewer, Water, Fire Dept.). \$140,000 of bonds are voted. Address The Mayor.

La., Lafayette—(Road).—\$300,000 of Lafayette Parish bonds have been purchased at par by the Hibernia Bank & Trust Co., New Orleans.

La., Lauderdale—(Highways).—Bids will be received until 11 A. M. Feb. 20 for \$300,000 of 5 per cent. \$500 denomination St. James Parish road bonds, dated Jan. 15, 1917, and maturing Jan. 15, 1918 to 1937, inclusive. Fred M. Bertaut is Secy. Police Jury.

La., Monroe—(Courthouse, Jail).—Election is to be called to vote on bonds. Result will not be known before April 15 or May 1. W. A. O'Kelly is Clerk Police Jury.

La., New Roads—(Road).—\$40,000 of bonds Road Dist. No. 3, Pointe Coupee Parish, have been purchased at par and premium by the Hibernia Bank & Trust Co., New Orleans.

Md., Annapolis—(Road).—\$600,000 of 4 per cent. \$1000 denomination Maryland State bonds have been purchased at 102.127 by the Equitable Trust Co., New York.

Md., Cumberland—(Public Improvement).—Bids will be received until 10 A. M. Feb. 19 for \$300,000 of an issue of \$500,000 of 4½ per cent. 40-year \$1000 denomination bonds. Thomas B. Koon is Mayor.

Miss., Aberdeen—(Road).—Monroe County has voted to issue road bonds. Amount not yet determined; will be fixed at February meeting of Board of Suprvs. of Monroe County. G. G. Ray is Clerk.

Miss., Belzoni—(School).—Board of Mayor and Aldermen have passed an ordinance asking that an election be held to vote on \$5000 of bonds.

Miss., Decatur—(Road).—Bids will be opened March 1 for \$30,000 of 6 per cent. 20-year bonds Road Dist. No. 1, Newton County. Address A. S. Smith.

Miss., Lexington—(Road).—Bd. of Suprvs. of Holmes County gives notice that electors of Suprvs. Dist. No. 3 and Road Dist. No. 3, in Richland and Pickens precincts, propose to organize a special road district and issue \$25,000 of bonds. J. H. Fuqua is Clk. Bd. of Suprvs.

Miss., Waynesboro—(Road).—\$25,000 of 5 per cent. 20-year \$500 denomination bonds, recently voted, have been purchased at par by John Nuveen & Co., banker, Chicago, Ill.

Mo., Billings—(Road).—\$40,000 of 5 per

cent. 1-15-year bonds have been purchased by the Mercantile Trust Co., St. Louis.

Mo., Jefferson City—(Road).—\$300,000 of 5 per cent. Cole County bonds will be purchased by the Jefferson City Trust Co.

Mo., Salem—(Road).—Bids will be received until noon Feb. 5 for \$20,000 of 4½ per cent. 1-20-year \$100 and \$1000 denomination bonds; dated Jan. 1, 1917; maturity Jan. 1, 1937. James H. McDonald is County Clk.

N. C., Asheville—(Street).—City proposes to issue about \$90,000 of 5 per cent. bonds, and which will probably be advertised in 30 days. J. G. Rankin is Mayor.

N. C., Gastonia—(Street).—Bids will be received until 8 P. M. Feb. 16 for \$150,000 of 5 per cent. street-improvement bonds. T. A. Hatchford is Clerk Board of Aldermen. Further particulars will be found in the advertising columns.

N. C., Greensboro—(Road).—\$200,000 of Rockingham County 30-year bonds have been purchased by Sidney Spitzer Co., Toledo, O.

N. C., Goldsboro—(Road).—Following townships in Wayne County have voted bonds: Nahunta, \$50,000; Great Swamp, \$40,000. It is also planned to call an election to vote on school bonds. Address County Commrs.

N. C., Thomasville—(Road).—Election will probably be held to vote on \$30,000 of railroad bonds. Address The Mayor.

N. C., Wentworth—(Road).—\$200,000 of Rockingham County 4½ per cent. bonds have been purchased by the Wachovia Bank & Trust Co., Winston-Salem, N. C.

N. C., West Asheville—(Street).—Bids will be received until noon Mch. 1 for \$170,000 5 and 5½ per cent. 30-year bonds. J. L. Crook is Mayor and H. B. Posey is Town Clerk.

N. C., Winston-Salem—(Sewer, Water, School).—Election is to be held March 27 to vote on \$175,000 sewer, \$125,000 water and \$50,000 school bonds. Address The Mayor.

Okla., Bartlesville—(School).—\$100,000 of 5 per cent. School Dist. high-school bonds, dated Jan. 2, 1917, and maturing Jan. 2, 1942, have been purchased at \$7500 premium and accrued interest by the Bartlesville National Bank of Bartlesville, Okla., represented by F. J. Spies, Jr.

Okla., Carnegie—(Sewer).—\$22,000 of bonds are voted. Address The Mayor.

Okla., Checotah—(Water).—\$125,000 of 25-year bonds are voted and sold. A. O. Johnson is Mayor.

Okla., Durant—(School).—\$82,000 of Durant School Dist., Bryan County, bonds voted Jan. 24 have been sold. Address Board of Trustees.

Okla., Haskell—(Light).—Bids will be received until Feb. 5 by W. S. Bush, Town Clerk, for \$20,000 of 6 per cent. electric-light bonds.

Okla., Marietta—(Funding).—\$16,800 of 6 per cent. 25-year bonds have been purchased by Geo. I. Gilbert & Co., Oklahoma City.

Okla., New London—(Sewer, Water, Light, City Hall).—\$30,000 sewer, \$10,000 water and light and \$7500 city-hall bonds are voted. Address The Mayor.

Okla., Nowata—(School).—Election is to be held Feb. 6 to vote on \$50,000 School Dist. bonds. Address Board of Trustees.

Okla., Pawnee—(Gas Plant).—An election

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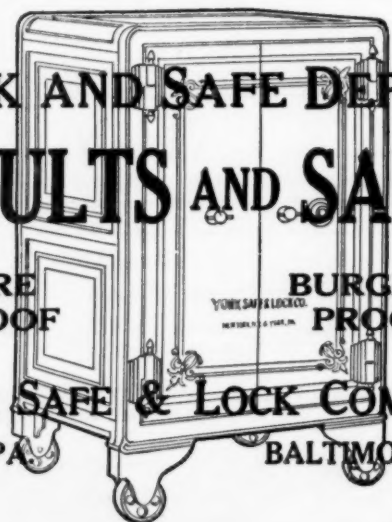
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will probably be called to vote on \$150,000 of bonds. Address The Mayor.

Okla., Tulsa—(School).—Election is to be held Feb. 6 to vote on \$500,000 of 5 per cent. 20-year bonds. J. H. Simmons is Mayor.

Okla., Tulsa—(Fire Station, Water, Incinerator, Filtration).—Ordinances have been prepared providing for the issuing of \$35,000 fire station, \$50,000 water-works, \$35,000 incinerator and \$180,000 of filtration bonds. J. H. Simmons is Mayor.

S. C., Chesterfield—(School).—Steps are being taken to call an election to vote on \$5000 high-school bonds. Address Board of Trustees.

S. C., Laurens—(Library).—Nothing definite decided as yet regarding proposed bond issue, according to letter received from J. C. Owings, Mayor.

S. C., Laurens—(School).—\$27,000 of 5 per cent. bonds School Dist. No. 5, Hunter Township, Laurens County, have been purchased by local parties at \$1177 premium. Address Board of Trustees.

S. C., Rock Hill—(Railroad Aid).—Reported that a bill is to be enacted authorizing an issue of \$20,000 of bonds, proceeds to be used in securing rights of way for new railroad. Address The Mayor.

Tenn., Bristol—(Improvements).—Application has been made to the Legislature asking authority to vote on \$75,000 of bonds and an election will probably be held next fall. J. H. Faucette is Mayor and W. H. Lynn, Commr. of Dept. of Accounts and Finance.

Tenn., Chattanooga—(School).—Application is to be made to the Legislature for authority to issue \$400,000 of bonds. Address School Board.

Tenn., Clarksville—(School).—\$30,000 of school-improvement bonds are being offered by T. H. Maraben, Mayor.

Tenn., Mountain City—(Road).—Election is to be held in March to vote on \$200,000 Johnson County bonds. Address County Commrs.

Tenn., Maryville—(Building).—Bids will be received until 10 A. M. Feb. 24 by Geo. D. Roberts, Chrmn. County Court, for \$50,000 of 5 per cent. 10-25-year \$500 denomination Blount County bonds.

Tenn., Nashville—(School).—Board of Education has decided to ask for an issue of \$225,000 bonds.

Tenn., Paris.—Application is to be made to the Legislature for authority to issue \$10,000 of 5 per cent. 30-year filtration plant and school bonds. Address The Mayor.

Tex., Amarillo—(Park, Paving).—Election is to be held Feb. 15 to vote on \$75,000 park and \$50,000 paving bonds. Address The Mayor.

Tex., Austin—(School).—\$5000 of 5 per cent. 10-40-year San Augustine Independent School Dist. bonds have been purchased by J. L. Arlitt, Austin, Tex.

Tex., Austin.—Bonds approved by Atty.-Gen.: \$50,000 of 5 per cent. 20-40-year Amarillo Independent School Dist.; \$10,000 of 5 per cent. 10-40-year El Paso County Common School Dist. No. W-3; \$10,000 Smelter School.

Tex., Cleburne—(School).—Election is to be held Feb. 28 to vote on \$250,000 of bonds. Address Board of Education.

Tex., Dallas—(Road).—Election is to be held in Dallas County in April to vote on \$100,000 bonds. Address County Commrs.

Tex., Dallas—(School).—Election will probably be held in April to vote on \$500,000 of school bonds. Henry D. Lindsley is Mayor.

Tex., El Paso—(Septic Tank, Drainage, Sewer, Street).—\$100,000 septic tank, \$75,000 drainage and \$40,000 sewer and \$40,000 street 4½ per cent. 20-40-year \$1000 denomination bonds have been purchased at \$9205.50 premium, accrued interest and expenses by W. R. Compton Co., St. Louis, Mo., and Sweet, Causey, Foster & Co., Denver, Col.

Tex., Fort Worth—(School).—Regarding report that School Board is planning to call an election to vote on \$400,000 bonds, a letter to the Manufacturers Record says: "No bond issue in prospect."

Tex., Goliad—(School).—\$8000 of 5 per cent. 1-16-year bonds Charco Independent School Dist., Goliad County, dated Mar. 1, 1917, are voted. R. E. Roberts is Secy. Board of Trustees.

Tex., Roby—(Road).—Election is to be held in Fisher County Feb. 17 to vote on \$100,000 of bonds. Address County Commrs.

Tex., San Antonio—(Railway, Courthouse).—\$121,000 railway and \$81,000 courthouse 4½ per cent. 10-40-year Bexar County bonds have been purchased at \$3111 premium and accrued interest by Seasongood & Mayer, Chicago.

Tex., Victoria—(School).—\$85,000 of 4½ per cent. \$1000 denomination bonds, dated Feb. 1917, recently voted, have been purchased by Powell-Garard Co., Chicago. J. A. Heath is Secy. Victoria Independent School Dist.

Tex., Welmar—(Water).—\$15,000 of bonds are voted. Address The Mayor.

Va., Bedford—(Road).—\$75,000 Forest Dist., Bedford County, bonds have been awarded to J. C. Mayer & Co., Cincinnati.

Va., Lexington—(County Bonds).—Bids will be received until noon Feb. 5 by A. T. Shields, County Clerk, for \$10,000 of 4½ per cent. Rockbridge County bonds, dated Apr. 2, 1917. Further particulars will be found in the advertising columns.)

W. Va., Adamstown—(School).—Bids will be received until 2 P. M. Feb. 20 for \$90,000 of 5 per cent. \$1000 denomination bonds Coal Dist., Harrison County; maturity 1922 to 1932. Emory H. Bates is Pres., and L. Wayman, Ogden, Secy. Board of Education.

W. Va., Buckhannon—(Road).—Election is to be held in Buckhannon Dist., Upshur County, Feb. 23 to vote on \$245,000 of bonds. Address County Commrs.

W. Va., Charleston—(State Bonds).—Renewal has been presented to the House providing for an issue of State bonds, to run from 1 to 34 years, proceeds to be used to pay the Virginia debt. Henry D. Hatfield is Governor.

W. Va., Clarksburg—(School).—Bids will be received until 2 P. M. Feb. 20 for \$90,000 of 5 per cent. \$1000 denomination bonds Coal Dist., Harrison County, redeemable 1922 to 1932. Emory H. Bates is Pres.

W. Va., Fairmont—(Bridges, Refunding).—\$760,000 of 4½ per cent. 1-30-year \$1000 denomination bonds have been purchased at \$773.77 by Well, Roth & Co. and Seasongood & Mayer, Cincinnati, Ohio. J. Walter Barnes is Commr. of Finance.

W. Va., Parsons—(Road).—Bids will be received until 1 P. M. Feb. 17 for \$150,000 of 5 per cent. bonds Fairfax Dist., Tucker County. Denominations \$500 and \$1000. Dated Jan. 1, 1917. A. Williamson is Pres. and H. F. Colebank, Clk.

W. Va., Sistersville—(Sewer).—Bids will be received until noon Feb. 14 by W. H. Reitz, City Clk., for \$30,000 of 5 per cent. 1-30-year bonds.

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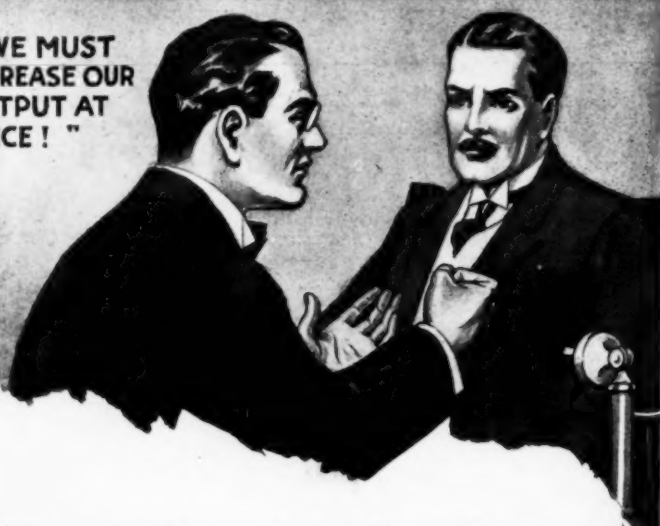
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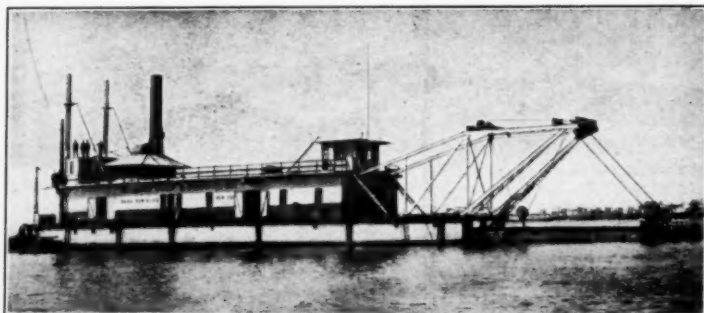


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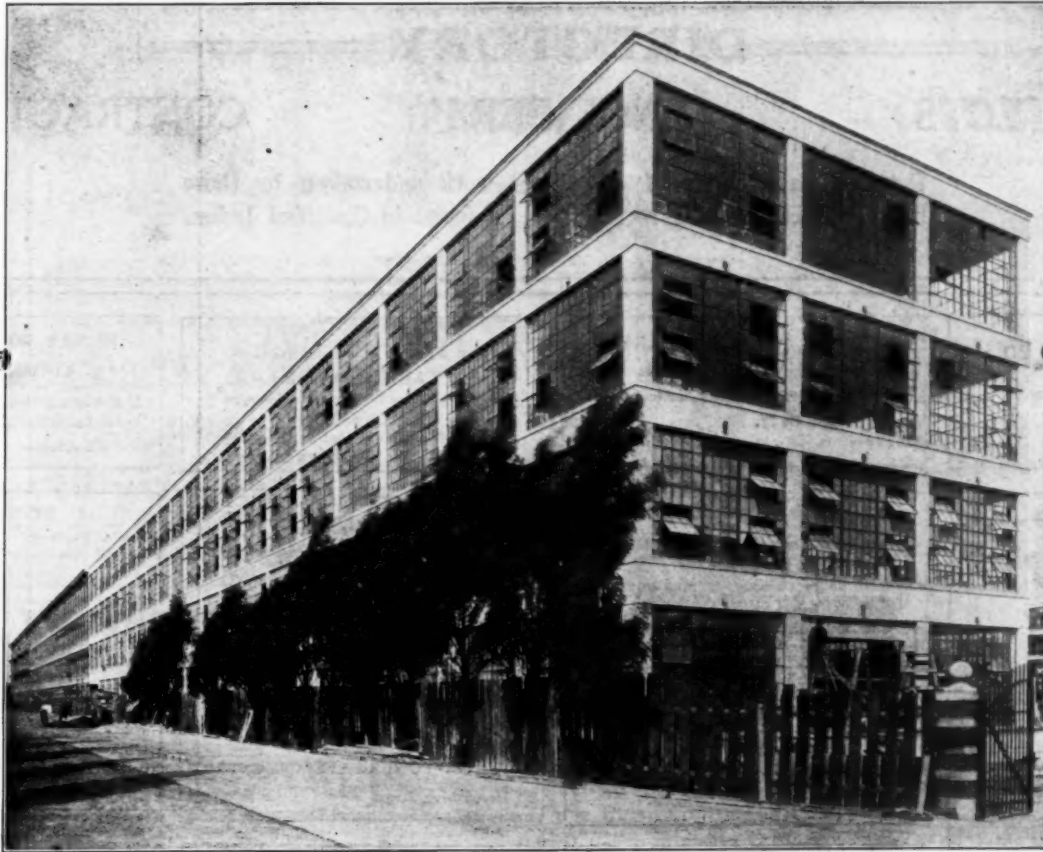
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Detailed classification of specialized work undertaken by those
having cards in this Directory will be found in Classified Index.

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TRADE LITERATURE

Rotator Hammer Drills.

Classes DP-33 and DR-33 of Sullivan rotator hammer drills are described in Bulletin No. 70 of the Sullivan Machinery Co., Chicago, Ill., DP-33 being a standard hammer drill with automatic steel rotation, suitable for general rock drilling; DR-33 being for use in softer material. Both hammers are hand-feed, one-man machines, weighing 40 pounds, and capable of drilling holes from 8 to 12 feet deep.

Oberlin College Calendar.

Each of the six leaves of the 1917 calendar of Oberlin (O.) College, carries, besides the calendar for two months, one or more pleasing views of buildings or parts of the college campus. Under each print, which may be lifted free except for the upper corners, is a description of the object shown. On the front cover is a detail picture of the handsome entrance to the Administration building; on the back cover the college calendar dates for 1917.

Insulations.

Porcelain and other insulations are listed and illustrated with photographic views and cutaway diagram drawings on "Standard Electrical Porcelain Data" sheets issued by J. H. Parker, Inc., and J. H. Parker & Son, Inc., Parkersburg, W. Va., and bound in a neat gray folder in the shape of a catalogue, held by brads in loose-leaf style to allow the addition of new sheets as they are issued.

City School Gardening.

A bulletin has been issued by the Bureau of Education of the Department of the Interior on gardening in elementary schools, by C. D. Jarvis. It treats of why gardening should be introduced into the schools, how it may be introduced and how it may be promoted by the schools. The pamphlet was prepared for school officials and others interested in the promotion of gardening in city schools, and attempts to show benefits therefrom and how the work may be organized and administered.

Railroad Curve Resistance.

Constituting an addition to railroad engineering information extant, in that nearly all the existing information regarding curve resistance has arisen from tests and experience with trains on steam railways, a bulletin has been issued by the University of Illinois, Railway Engineering Department, detailing tests undertaken to measure the curve resistance of a 23-ton electric car, owned by the department; with a view of determining its value at various speeds and on various curves.

Brandy Power Hammers.

Brandy & Co., Inc., 141 Milk St., Boston, Mass., has issued a catalogue on its set of motor driven Champion and Peerless power hammers, ranging in size from 25 to 500 pounds weight of ram. Foremost among the qualities of merit claimed are said to be their elasticity, control and force of the blow struck. They are designed for light and heavy railroad, machine and blacksmith work, swaging, collaring, drawing, plating, spindle-making, etc., and are used throughout the country on these and other classes of work.

OBITUARY.

Capt. Elton A. Smith, president of the H. B. Smith Machine Co., woodworking machinery, Smithfield, N. J., died on the 16th of January, at the age of 60. For some years prior to becoming the directing spirit in the company of which he was president Captain Smith spent a large part of his time in the South, where he was widely known and closely identified with the lumber industry. A study of conditions gave him a deep appreciation of the resources and natural advantages of the latter section.

D. C. PICARD, B. Sc. M. A.

(Formerly President the Picard-Law Co., Atlanta, Ga.)

Analytical and Consulting Chemist.

Industrial Problems. Municipal Sanitary Work and Testing of Municipal Supplies. Analysis of Foods, Cottonseed Products, Fertilizers, Minerals, Fuel and Water—Chemical and Bacteriological.
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Mining Geologist

Formerly Asst. State Geol. W. Va. Formerly Mgr. National Limestone Co. of W. Va. Consulting Geologist National Limestone Co. GEOLOGIST BALTIMORE & OHIO R. R.
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Research, consultation and design of plants in connection with Chemical and Hydrometallurgical processes, prevention of stream pollution, trade waste treatment, etc.
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The oldest, largest and best equipped organization of Chemists and Engineers in the country for the investigation of conditions affecting the efficiency and economy of industrial operations.

93 Broad Street

BOSTON

INDUSTRIAL NEWS OF INTEREST

(Continued from Page 86.)

Waddell & Son.

Dr. J. A. L. Waddell who has been engaged for many years in consulting bridge engineering work now has his office at 334 Wyandotte St., Kansas City, Mo., and associated with him are N. Everett Waddell, C. E., and Robert C. Barnett, C.E., the firm being Waddell & Son. In addition to bridge work the firm has designed elevated railways and has had considerable experience in foundation work and has special adaptability for making appraisals.

Union Switch & Signal Co. Elects President.

In accordance with merger proceedings of the Union Switch & Signal Co. and the Westinghouse Air Brake Co., both of Pittsburgh, Pa., A. L. Humphrey, first vice-president of the latter, has been elected president of the former and will assume the executive

responsibilities of both companies. Mr. Humphrey has had wide experience along mechanical and railroad lines, fitting him for his present positions. He has been machinist apprentice, gang boss, general contractor, machine shop and foundry organizer, constructing division foreman of the Majave Division of the Central Pacific Railroad, master mechanic and superintendent of motive power of the Colorado Midland Railway, in the same capacity for the Alton Railway.

Large Additional Westinghouse Unit.

Between \$5,000,000 and \$7,000,000 will be expended by the Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., in the immediate construction of a factory near Philadelphia, on the Delaware River, at which close to 15,000 employees will be engaged when the plant is in full operation. It is understood. With present facilities working at top speed, over \$31,000,000 of unfilled orders for the company's regular products exclusive of war articles, now on the books, and the demand increasing it has been found necessary to thus enlarge, with provisions for

ultimately enlarging the new plant to several times the size of the East Pittsburgh works, if that is found necessary.

One of the leading factors in this phenomenal increase of electrical goods output is improvements in large steam electric generating units, leading to a great increase in central station capacity near manufacturing centers and making profitable the sale of electric current at rates that have stimulated consumption to such an extent as to cause an enormous demand for industrial motors. Increased attention to hydro-electric developments, the adoption of electric power to railroading and electric propulsion for ships are other important factors in this growth.

Classified Opportunities

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

HOW MINING PROFITS ARE MADE.—The Saturday Evening Post recently published a series of the most interesting and sensible articles on the mining industry that have ever appeared. One in particular clearly shows the difference between buying promoters' mining stocks and investing in legitimate operations where the actual profits are made. We will send this article free upon receipt of 2c. stamp. The Lyon Investment Co., Joplin, Mo.

FOR SALE—700 acres on railroad adjoining town of 5000; textile mill site and town development or subdivision property; electric power; extensive pike frontage. Address Doak Aydelott, Tullahoma, Tenn.

FOR SALE? Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

FELDSPAR If you have or want them, and write
KAOLIN. S. F. Sherman, 52 Broadway, N. Y. C.

SAND AND CLAY

IF INTERESTED in bank sand and pottery clays near here, write like A. Chase, Memphis, Tenn.

ZINC LANDS

ZINC LANDS.—Undeveloped zinc lands adjoining producing mines at \$10 to \$25 per acre are unequalled investments and certain to double in price during the year without development. Many have increased 3000 per cent with but little expense of developing. Producing mines for sale also. W. F. Reeves, Marshall, Ark.

FOR SALE (ARKANSAS).—A bargain: 300 acres tested zinc-ore land found to contain good mineral value, located in Marion county, three miles from railroad station, in the rapidly developing rich mining Kingdom Springs district. Alex. C. Thompson, Trustee, Westerly, R. I.

LIMESTONE

FOR SALE.—The largest and best hard limestone deposit in South Florida, located within one-fourth of a mile of main line of railroad. The demand for this rock for road building and concrete work as well as for fertilizer purposes is unlimited. Will sell all or one-half interest to right party. If interested, write M. H. Snow, Brooksville, Fla.

UMBER PROPERTY

UMBER PROPERTY FOR SALE.—The largest and only commercial vein of genuine umber in the U. S. for sale. Vein is 4 to 5 ft. thick, covering large area. Price \$50,000. Well prospected. Brokers and agents, write for listing. Address T. W. Glover, President, Gunterville, Alabama.

IRON AND MANGANESE DEPOSITS

AN INVESTMENT.—For sale, 15 and 5-acre tract of land with 32-ft. seam of iron ore in Birmingham district. Adjoining corporation 3 blocks from Motor Club Speedway. E. B., 910 Woodward Ave., Birmingham, Ala.

FOR SALE.—Iron-ore property; 15,000 acres. Iron-ore deposits in heart of Tennessee iron district; property just out of litigation and first time placed on market. Four large furnaces within 20 miles, now running full capacity. Reports show millions of tons iron running high as 58%. 500 opening tests. Heavily timbered. Engineer's and forester's reports with map to those interested. Whitson & Co., McFerrin Road, Nashville, Tenn.

ASBESTOS

ASBESTOS (AMPHIBOLE) PROPERTY for sale. Large deposits of good quality. Official endorsements. Splendid opportunity in new industry. Price and terms reasonable. John Martin, 41 Ashby St., Atlanta, Ga.

GRAPHITE

GRAPHITE FOR SALE.—300 million tons 4% graphitic ore, 900 acres, 3 miles R. R.; ample water and ideal plant sites; can subdivide. Price \$50,000. Roland G. Spearman, Talladega, Ala.

COAL LANDS

COAL LANDS FOR SALE.—Fine coal land, Tennessee; 2 veins; railroad through property; adjoins operating mines each side; good title; favorable deal. Non-resident owners. Address No. 3004, care Manufacturers Record, Balto., Md.

2000 ACRES of coal lands for sale on head of Kentucky River, the Big Elkhorn. Seam of coal six to nine feet thick. Also 2000 acres near head of Rockhouse Creek; same county; same coal; four to six feet. Address J. H. Frazier, Whitesburg, Ky.

COAL LANDS

COAL LANDS for lease and sale; \$25 to \$500 per acre. Railroad through different properties. Operating and investment opportunities. Address No. 3027, care Manufacturers Record, Balto., Md.

50,000 ACRES of valuable coal land; about one-tenth of the acreage leased to four operating companies, the net income from which is about \$30,000 per year. With proper management this property will yield a very large income. Offered at an attractive price by P. A. Green & Company, 713 Mutual Building, Richmond, Va.

COAL LANDS AND MINES

Mine Ready for Operation With 24,000 Acres Good **COAL LAND FOR SALE** Cheap to Close an Estate. Power plant, mining machines, cars, etc., fourteen miles of standard and narrow-gauge railroad, connecting with the Southern Railway at Lin Rock, Ala., sixty-five miles westerly from Chattanooga; four locomotives, cars, eighty dwellings and large commissary. Much valuable hardwood timber, with two good sawmills; most of the land on Cumberland Plateau suitable for agriculture when cleared; coal known as Belmont Block, very hard, high in volatile matter, excellent for domestic use. Low freight rates and best of markets. For full particulars, price and terms address F. D. Pierce, Bridgeport, Ala.

POCAHONTAS COAL LANDS for sale and lease. Mines for sale. Charles V. Price, Welch, W. Va.

COAL AND TIMBER LANDS

FOR SALE OR LEASE.—4500 acres valuable coal land. High-grade steam and coking coal; one excellent vein domestic coal, best in the South; low ash, high in carbon. Four veins of coal, 4 to 6 ft. thick; drift mining. Demand in excess of supply. Eight million feet original-growth merchantable timber. Plenty of other timber for mine props. On N. & W. R. R. Pocahontas freight rate. Title perfect. Write for particulars. W. E. Harris, 420 Mutual Bldg., Richmond, Va.

I HAVE 15,000 acres of coal and timber land for sale, the title perfect, all in a body; coal shows 4 ft. Price reasonable. Railroad now being built very close to this land. Address E. C. Shelton, Altamont, Tenn.

FOR SALE.—In fee, large acreage fine virgin oak and hardwoods, good coal land; convenient to railroad. Details on request. O. B. Rector, Crossville, Tenn.

SAWMILL AND TIMBER

FOR SALE.—Large short-leaf yellow-pine plant, complete; one of the few left with 15 to 18 years' operation in sight. Want to deal with legitimate buyers only. No commission. Address No. 3008, care Manufacturers Record.

TIMBER

FOR SALE.—BY OWNERS.—Several tracts hardwood timber, white oak and chestnut oak, in boundaries from 2,000,000 to 15,000,000 feet, located on Chesapeake & Ohio Railway in Alleghany county, Virginia; also on branch Norfolk & Western Railway in Craig county, Virginia, and Monroe county, West Virginia. Address "Timber," P. O. Box 865, Charleston, W. Va.

TIMBER FOR SALE.—Seven million feet of extra fine timber, mostly pine; about 40 miles from Richmond, near both Southern and Norfolk & Western. Price reasonable; terms easy. Edward Eggleston, Owner, Amelia, Va.

FOR SALE.—About three hundred and seventy-five million feet of the highest grade and quality of virgin long-leaf yellow pine. For particulars address H. H. Wefel, Jr., Mobile, Alabama.

TIMBER LAND

100,000,000 FEET choice hardwood timber. 15,000 acres virgin tract, above overflow, on R. R. For details address No. 3016, care Manufacturers Record, Balto., Md.

FOR SALE.—About 500 acres of virgin timber in Bland Co., Va., within half-mile of new extension of New River, Holston & Western R. R. For particulars apply to G. D. Davidson, War, W. Va.

VALUABLE TIMBER TRACT FOR SALE on large navigable river, near Wilmington, N. C.; 7500 acres in fee, in one tract, fronting four miles on river. Will cut FIFTY MILLION FEET, mostly pine, balance cypress, poplar and gum. Most of timber on four thousand acres with average haul of one mile to the river. Price attractive. Address Charles N. Riker, Union Trust Building, Washington, D. C.

UNLIMITED quantities of the best timber to be found anywhere at the prices under all other timber dealers. Let me show you. F. A. Baird, Redding, Cal.

FARM AND TIMBER LANDS

WE OWN LARGE TRACTS OF TIMBER LANDS, cut-over lands and colonizing lands. If interested, address H. H. Wefel, Jr., & Co., Mobile, Alabama.

FARM AND TIMBER LANDS

SOUTHERN LANDS. We are prepared to furnish desirable farm lands, undeveloped and developed, and stocked, also hardwood and pine timber and cut-over lands, in any size tract wanted, in Ala., Miss. and La. These lands are exceptionally cheap and offer an attractive opportunity for investment. We also have some large farms to trade for city property. We are anxious to get in touch with people interested in these classes of properties and solicit correspondence. Bailey-Jones Real Estate & Ins. Co., Birmingham, Ala.

4000 ACRES, half timber and half cut-over land, for sale, preferably as a whole or in tracts of not less than 1000 acres each; property joins the town of Surrency, Appling county, Ga., on Southern Railway main line; fine stand of both pine and cypress timber; ideal location for stock farm or combination mill and colony farming. Land in vicinity noted for its record production of staple crops. For sale by owner, attractive price and terms, especially if bought as a whole. Wm. Hurd Hillyer, Atlanta, Ga.

STOCK FARMS

FOR SALE.—Ten thousand acres especially well adapted for a ranch, located South Alabama. If buyer stocks ranch, would require no payment for three or four years. Address H. H. Wefel, Jr., Owner, Mobile, Ala.

CATTLE RANCH

CATTLE RANCH FOR SALE. 67,000 acres improved ranch, stocked with high-grade Hereford cattle, at a bargain. 31,000 acres at \$3.40 per acre. 7,500 acres at \$4.00 per acre. 30,000 acres leased for a term of years. Cattle will be sold at low figure to purchaser of ranch. \$35,000 cash will handle ranch. Address Box 40, Marfa, Tex.

FRUIT, FARM AND TRUCK LANDS

THESE COLUMNS ARE CLOSELY READ BY PEOPLE for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

CUBA

ORANGE GROVES AND SUGAR PLANTATIONS; 3 with houses ready for occupancy; all kinds of property from 2½ acres for \$25 up to millions. Hartley-Hellyer, Balto., Md.

FLORIDA

FREE. "THE WINTER GARDEN OF AMERICA," to Fruit Growers, Truckers, General Farmers, Cattle, Hog and Poultry Raisers. Folks interested in the great Indian River Section of Florida, write Indian River Farms Company, Suite O, 609 Putnam Bldg., Davenport, Iowa.

REAL ESTATE BARGAINS.

For high-grade orange groves, winter homes, city property, timber tracts, Florida cattle ranches and other properties of all kinds consult
The Waring Realty Co., Orlando, Fla.

YOU BETTER BUY that forty acres I offer near Florence Villa, Florida. Everything considered, it can't be beaten for fruit, truck, stock or development. Price right, title right. Henry A. Marks, Winter Haven, Fla.

FOR A SAFE and permanent investment Florida lands and values should interest you. Manatee County is the best location, and is destined to become one of the most progressive settlements in the State and a very profitable investment. Florida farms in Manatee County are below frost belt; have rich soil, with 365 producing days. Easy terms. J. Henry Strohmeier, Maryland Casualty Tower Building, Baltimore, Md., and Sarasota, Florida.

FOR SALE.—13 acres finest trucking land in Florida, located in one of the most progressive towns in the leading section for truck crops, on main line S. A. L. Ry. and A. C. L. Ry. Crops purchased for cash at station platform. Land is ready for the plow and located within 8 blocks of post-office and new \$60,000 high school. Splendid hard-surfaced roads. Price very moderate, and terms if desired. We are owners and not real estate dealers. Address Kilgore Seed Co., Plant City, Fla.

FOR SALE.—About 47 acres of valuable bearing grove of early and late Parson Brown and pineapple oranges and grapefruit; all in first-class condition. One of the best large groves in the State, and has a complete new, modern, ancient packing-house directly on the Seaboard Air Line Railway at Weirsdale, Marion County, Florida. Call by appointment on Dr. E. B. Lytle, Stanton, Florida, or write Alex. C. Thompson, Westerly, R. I.

FLORIDA.—Do you intend visiting the land of health and sunshine this winter? If so, write M. J. Hoenig, Prop. Hotel Palma, West Palm Beach, Fla., for instructive booklet.

FLORIDA

FOR SALE.

6500 ACRES IN FLORIDA.

WHOLESALE PRICE. WILL NOT RETAIL.

Located on the East Coast, in Volusia County; price \$10 per acre; \$1 per acre down, balance \$1 per acre per year, 6 per cent, interest on deferred payments; 8 miles west of New Smyrna, Fla.; on the Orange City branch of the Florida East Coast R. R.; Indian Springs Station is only ¼ of a mile from it; 2250 acres are "prairie land." Has an elevation of about 22½ to 41 feet above the tidewater; top soil is a black sandy loam, underlaid with clay. Would make an ideal stock range. There are forty families farming in the adjoining sections; some have raised 45 to 50 bushels of corn to the acre, 50 barrels of Irish potatoes, and all kinds of garden truck, such as lettuce, beans, peas, Bermuda onions, besides good crops of rice, oats and grasses for feed. Title good. Owned in fee-simple, without incumbrance. Other information will be furnished upon request by E. C. Howe, 747 Hartford Bldg., Chicago, Ill.

GEORGIA

THE SOUTHEASTERN LAND SHOW at Atlanta, February 1-15, offers unlimited opportunities to those seeking farms in this section at favorable prices. Very low round-trip railway rates. Send for our booklet of 300 Georgia farms for sale. All sections of the State. Small and large tracts; improved and unimproved. Adapted to raising cotton, corn, hay, oats, potatoes, vegetables, sugar cane, fruits, pecans, livestock, etc. Chas. D. Hurt or James L. Logan, 301-2 Empire Bldg., Atlanta, Ga.

2700 ACRES of fine dairy or cattle land; miles from Savannah can be bought at \$20 per acre. A bargain. Skeffington & White, Savannah, Ga.

KENTUCKY

BLUE GRASS FARMS, Central Kentucky. All sizes and varieties. For homeseeker and investor. Advance seems absolutely certain. Buy now. Eugene Rucker, Georgetown, Ky.

NEW MEXICO

BEST MONEY-MAKING AND CHEAPEST RANCH IN NEW MEXICO.—For Sale 65,000 acres, solid body, of fertile land in Mora County, New Mexico; altitude about 6000 feet; 75 miles barb-wire fencing on cedar posts; 35 miles permanent main ditches, affording superabundance of free, pure, spring water in 13 pastures; 1000 acres of alfalfa, 3 cuttings net \$30,000, besides pasture in spring and fall; store, grist mill, orchard, farming and cattle raising netting from \$5,000 to \$30,000 yearly. Close attention to the affairs of this property would largely increase revenue; 5 miles private telephone wire; 13-room manor-house, 2 cottages, 10 adobe houses for laborers, storehouse, warehouse, barns, hay sheds, icehouse, smith shop, machinery house, corrals, feeding racks, branding pens, scales and everything needed to run a modern ranch. Price, \$20 per acre; part cash. Domestic animals, hay, grain and merchandise at present value, all cash. This location is within 25 miles of the finest hunting region in the heart of the Southern Rockies. To interested parties able to buy and meaning business, will mail description and map. B. White, 224 Wainwright Bldg., St. Louis, Missouri.

TEXAS

TEXAS LANDS AND SECURITIES.—Texas lands and securities offer sure investments and handsome profits. Write us your ability to purchase and length of time you want your investment to run. You will be given ample time and opportunity within which to investigate us and the land or security offered. McCelvey Loan and Investment Company, Temple, Texas.

C. H. MARTIN, the Texas land man, Jacksonville, Texas, sells and exchanges property from vacant lots to large ranches.

VIRGINIA

BUY A FARM IN VIRGINIA.—I offer several large farms suitable for dairy and stock farms. Demand in Richmond for milk greater than the supply. Long grazing season and rich corn lands make Virginia river plantations ideal stock and dairy farms. Investigate the conditions here before buying elsewhere. Information cheerfully given. Correspondence invited. Prompt replies. 710-acre James River farm, 15 miles from Richmond, 1 mile from railroad station. 800 acres in cultivation and grass; 300 is of the very best James River low grounds; 10-room house; barns and outbuildings. Write for description and price.

240-acre farm in Mecklenburg County; 150 acres in cultivation; very rich, productive land; near railroad station. Twelve-room dwelling and outbuildings. Can furnish large or small farms in any section of Virginia. Tell me of the kind of farm you want. W. E. Harris, 420 Mutual Bldg., Richmond, Va.

A 1130-ACRE FARM INVESTMENT. Located in the Piedmont section of Virginia; 440 acres river bottom; 350 acres of oak, hickory and pine. The upland is good and lies well. Eastern markets promptly reached. Local markets excellent. This farm and its price should appeal to you if you ever expect to invest in farm lands. Let us send you full description. Robeson Hall Land Co., Morristown, Tenn.

FRUIT, FARM AND TRUCK LANDS

VIRGINIA

SHEANDOAH VALLEY OF VIRGINIA. Where Blue Grass and Alfalfa Grow. In the heart of the Apple Belt. Delightful climate. Fertile Soil. Write John M. Londeree, Staunton, Va.

SPLENDID 400-ACRE Virginia farm; beautiful 10-room dwelling in large, shady lawn. Convenient to town, on public road. Will exchange for Chicago property. Pollard & Bagby, Inc., Richmond, Va.

FOR SALE—High-class farm of about 300 acres; 2 1/2 miles from Gordonsville, Virginia. Good orchard, and grazing section. Price and terms inviting. Vaughan-Whitehurst Co., Richmond, Va.

DAIRY, CROP AND TRUCK FARMS. SUBURBAN AND COUNTRY RESIDENCES. Good roads, mild climate, good labor conditions, desirable neighbors. Write us about the kind of place, large or small, you might sometime like to live on. Slaymaker-Schneider Corp., No. 612 King St., Alexandria, Va.

2700-ACRE FARM on James River, Va.; deep-water facilities; 1700 acres fine timber; 1000 acres high state of cultivation; well equipped; new barns, etc.; splendid rich man's estate. Apply for price, Green & Redd, Richmond, Va.

ATTORNEYS

RAYMOND M. HUDSON, Attorney, Washington, D. C. Practice before U. S. Supreme Court, U. S. Court of Claims, D. C. Court of Appeals, D. C. Supreme Court, Va. and Md. Courts, Executive Departments, Congressional Committees, Federal Reserve Board, Federal Trade Commission, Interstate Commerce Commission. Cable "Rayhud."

CAPITAL WANTED

WANTED—\$15,000 to quarry pink Tennessee marble. Quarry equipped ready to operate, but needs working capital and slightly increased facilities. Exceptional opportunity. Investigation invited. Address M. C., Box 96, Knoxville, Tenn.

COLLECTIONS AND ADJUSTMENTS

COLLECTIONS AND ADJUSTMENTS MADE ANYWHERE IN THE SOUTH. Careful attention given to all claims entrusted to us on a straight commission basis. No membership fees, retainers or other charges.

SOUTHERN MERCANTILE ADJUSTMENT COMPANY. UNION NATIONAL BANK BUILDING, Columbia, South Carolina.

FINANCIAL

A SAFE INVESTMENT. Steady and large dividends.

We offer 7% preferred and guaranteed stock, which also shares in all profits of the company. This means 10% to 20% now, and much more later. We grow the Albemarle Pipin, the finest apple in the world, made famous by Queen Victoria. It requires a combination of soil and elevation, which is very limited. It cannot, therefore, be overdone. We have developed the selling end of the business and ship boxed Albemarle Pipins to satisfied customers in thirty odd States and abroad. We need capital. It will pay you to write us for particulars. Pipin Co., Charlottesville, Va.

INCORPORATING COMPANIES

CORPORATIONS ORGANIZED under the broad, liberal and substantial laws of Delaware. Minimum original and annual expense. Estimates cheerfully furnished. Write for our revised DIGEST of the law. CORPORATION COMPANY OF DELAWARE, Equitable Building, Wilmington, Del.

BUSINESS OPPORTUNITIES

FOR SALE—The Lakeside Hotel and grounds, with or without a full-bearing 5-acre orange grove, located on south shore Lake Weir, Marion county, Florida, on Atlantic Coast Line Railway. A most healthy, attractive location. Hotel situated 90 feet above lake, which is 7 by 5 miles, abounding in fish and game, and surrounded by a white sandy beach. Call on F. C. Perrin, Lakeside Hotel, Weirsdale, Fla., or write Alex. C. Thompson, Treas., Westerly, R. I.

PARTIES having valuable undeveloped properties or chemical factories or processes needing development or infusion of push, write to address below. Advertiser is thoroughly trained chemist with 12 years experience in executive and managerial capacities in connection with industrial chemistry, and is seeking new connections along similar lines. Might invest. Address No. 3026, care Manufacturers Record, Balto., Md.

BUSINESS OPPORTUNITIES

COME TO TAMPA, THE GOLDEN CITY OF THE SUNNY SOUTH. Professional man, owning controlling stock in wholesale paper and woodenware company, wants to dispose of same so as to devote all his time to profession. Made a net profit of 30% last year. If interested, address R. D. Whiteside, D.D.S., 710 South Edison Ave., Tampa, Fla.

WILL PURCHASE desirable electric-light or gas property having established earnings, or finance consolidation of a group of such properties. Advise concerning present annual gross earnings and franchise conditions. Treasurer, P. O. Box 1136, Providence, R. I.

THE OWNERS of the old Wilkinson gold-mining tract on Silver Creek, Burke County, N. C., wish to confer with parties able to dredge the bottom lands for gold. Drawer 189, Lincolnton, N. C.

PARTNER WANTED in a wholesale fish shipping business. A good proposition to the right party in the best town in Florida. Address P. O. Box 186, Fort Myers, Florida.

FOR RENT—On reasonable terms, for a long period, a 2-story shop situated in a town of 50,000 inhabitants in Southeastern Pennsylvania. This shop has good railroad facilities, and consists of one 2-story building, 200 ft. long, 43 ft. wide; one 1-story building, 238 ft. long, 56 ft. wide; one 1-story building, 330 ft. long, 57 ft. wide. The right party can secure a very cheap rental on the above property. Address No. 3020, care Manufacturers Record, Balto., Md.

SOME ENTERPRISING TOWN by prompt action can secure an unusually desirable manufacturing establishment. Unlimited market. Used everywhere. Liberal profits. Inexpensive equipment. Almost any wood-working plant can manufacture the article, which is a new invention and patented window screen. Waste wood can be largely used. Address Owners, Lindbeck & Murray, 172 N. Water St., Rochester, N. Y.

OIL AND GAS INVESTMENTS.—Having leases for oil and gas purposes covering 65,000 acres in new field, desire financial assistance in developing same, either through stock company or working-interest plan. Write me at once. A. B. Brode, Huntington, W. Va.

WANTED—Partner with from six to eight thousand to invest with like amount in a lucrative manufacturing business. For particulars address Box 304, Anniston, Ala.

WE reorganize, refinance, consolidate and sell going manufacturing enterprises. Positions with investment offered. Have buyers for public utility and railroad properties of merit. Bankers' Holding Co., Syracuse, N. Y.

A HIGHLY SUCCESSFUL manufacturer of machinery proposes to build and equip a new, modern machine shop and foundry combined, and invites correspondence with manufacturers who would consider selling or consolidating in order to reduce their overhead charges and selling expenses. This is a fine opportunity for a small manufacturer of an established line to sell or consolidate with a large and well-rated manufacturer. Address No. 3015, care Manufacturers Record.

BUILDINGS—STEEL PORTABLE

"PRUDENTIAL" STEEL BUILDINGS for all purposes; portable, one-story construction; workshops, toolhouses, storage garages, bunkhouses, etc. Write for Catalog A. C. D. Pruden Company, Baltimore, Md.

COLLEGES AND SCHOOLS

EXECUTIVES ARE IN DEMAND IN MODERN BUSINESS.—Many of the largest business organizations in the U. S. have adopted Pace Standardized Courses to meet their growing need for competent executives. To the ambitious man who is looking for advancement in modern business the opportunity presented by this nation-wide educational movement is unparalleled. You can take advantage of the same courses by direct enrollment. Instruction by mail—no interference with present employment. Free Bulletin (32 pp.) gives complete information. Ask for Bulletin M-5. Pace & Pace, Hudson Terminal, 30 Church St., New York.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER AND PATENT LAWYER, 734 Eighth St. N. W., Washington, D. C. Graduate Engineer Lehigh University; Member Bar U. S. Supreme Court; Former Examiner U. S. Patent Office. PATENTS AND TRADEMARKS. Inventions considered from engineering and legal standpoints. Infringements and extent of patent monopoly investigated for manufacturers. Glad to answer any inquiries.

HIGH-VALUE PATENTS.

Patents that fully protect. Patents that Pay Largest Financial Returns are the kind we obtain. References. SUCCESSFUL Inventors and WELL-KNOWN Manufacturers. Send 8 cents for new book of extraordinary interest and value to inventors. R. S. & A. B. Lacey, 43 Barrister Building, Washington, D. C. Established 1869.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Trade marks registered.

Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

PATENT ATTORNEYS

PATENT YOUR IDEAS.—\$9000 offered for certain inventions; book, "How to Obtain a Patent," and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, Patent Attorneys, 975 F St., Washington, D. C.

PATENTS—Write for how to obtain a patent, list of patent buyers, and inventions wanted. \$1,000,000 in prizes offered for inventions. Send sketch for free opinion as to patentability. Our four books sent free upon request. Patents advertised free. We assist investors to sell their inventions. Victor J. Evans Co., Patent Attorneys, 712 Ninth St., Washington, D. C.

NORMAN T. WHITAKER, Attorney-at-Law and Mechanical Engineer. Former Assistant Examiner of Patents and Trade-Marks, U. S. Patent Office, 22 Legal Building (opposite Patent Office), Washington, D. C.

INDUSTRIES WANTED

GLASS FACTORIES

GLASS MANUFACTURERS WANTED. Excellent opportunity is offered for the manufacturing of window glass, bottles, etc., at Baltimore, Md. Will sell 230 acres of silica sand banks, supply unlimited, located on navigable river near Baltimore; easy of access, affording low cost per ton delivery. Cheap fuel and labor. Baltimore is the best distributing center on the Eastern seaboard, and is growing faster commercially than any other city in the United States. Will gladly furnish full details. Wm. E. Ferguson & Co., 217 St. Paul St., Baltimore, Md.

MISCELLANEOUS

SISTERSVILLE, W. VA., on the B. & O. R. R. and Ohio River, situated in the steel district of the United States, offers to all manufacturers: Electric power at 1/4¢ per K. W. H., free factory sites up to thirty acres, Sc. natural gas, \$1.25 coal, and other equally cheap natural resources. It is the richest city in the United States per capita and one of the best governed. But this is not all. It possesses men whose co-operation is offered financially and otherwise—the type you will want to associate with as a business executive. Write Secretary Chamber of Commerce.

CARLISLE, PENNSYLVANIA, wants men; men of enterprise; men of vision who can establish rated industries. Co-operation will be given to the fullest extent. One of the lowest electric-power rates in the country. Baltimore freight classification. Educational advantages beyond the average city of 10,000 inhabitants. Address Carlisle Chamber of Commerce.

LOCATION WANTED

ANY TOWN desirous of securing an industry that can be started with very small outlay of money and built up to large proportions in a comparatively short time, please communicate with the undersigned and particulars will be furnished. The article is a new invention and patented window screen, and is without question superior to anything of the nature on the market. Unlimited market. Good profits. Simple and easy to make. Almost any woodworking plant can be utilized. Address Owners, Murray & Lindbeck, 172 N. Water St., Rochester, N. Y.

FACTORY SITES

FOR SALE—Fine water-front property on Norfolk and Portsmouth harbor. Deep water, 35 feet. Full information. C. H. Gates, Newport News, Virginia.

FOR SALE OR LEASE—90 acres in the center of the harbor of Norfolk and Portsmouth; 1250 feet water front. For particulars address J. L. Marye, Newport News, Va.

LARGE OR SMALL MANUFACTURING SITES at Richmond, Va. Water and rail transportation give low freight rates to all parts of the country. Good labor conditions; near raw materials; mild climate. 350 acres fronting James River for 3900 ft. above high water; channel 23 ft. deep. Two miles of railroad will connect property with 6 trunk-line railroads. Will sell all or part of tract to manufacturer. For full particulars address W. E. Harris, 429 Mutual Bldg., Richmond, Va.

BALTIMORE FACTORY AND TERMINAL SITES.—Statement of Asa G. Candler, President The Coca-Cola Co.: "Investigation convinced us that Baltimore is not only the commercial metropolis for Southern trade, but that it affords shipping opportunities both by water and rail for domestic and foreign traffic superior to any of the great cities in any section of the United States." Locate in Baltimore and derive these advantages. We can provide accommodations to meet your requirements.

"OUR MOTTO": FACTORY AND TERMINAL SITES IN BALTIMORE. Wm. Martien & Co., Ninth Floor, Lexington St. Bldg., Balto., Md.

INDUSTRIAL PLANTS FOR SALE

LAUNDRY AND DRY CLEANING PLANT

LAUNDRY AND DRY-CLEANING PLANT, complete, up to date, electrical driven, in city 25,000, south of Ohio River; doing \$500 a week, showing more than 25 per cent. net profit; selling on account of health. Address No. 3025, care Manufacturers Record.

INDUSTRIAL PLANTS FOR SALE

MILLWORK PLANT

FOR SALE—Millwork plant; nearly new, show-case variety. All or half interest. Partner to be contractor or manufacturer of ability. Nearest competition 200 miles. Plant operating; railroad side. Located in Tallahassee, Fla. Write Box 384, Tallahassee, Fla.

FURNITURE FACTORY

WANT TO SELL OR LEASE a well-equipped furniture manufacturing plant. Machinery is in good condition and running every day. A man or firm that understands the business can secure a big bargain on easy terms or on long lease. If interested, address P. O. Box No. 606, Oxford, N. C.

MILL

FOR SALE—A 30-barrel mill in Southern Virginia. New machinery recently installed. Water-power from steel overshoot; dam recently rebuilt. Burr corn mill and small sawmill attached. Old established custom and merchant business in flour, meal and feed-stuff; good trade in good neighborhood. About 140 acres of land attached, including river bottom and upland. G. C. Stone, Hurl, Va.

MEN WANTED

IF ACTUALLY QUALIFIED for executive, manufacturing, technical or administrative position carrying salary between \$2500 and \$15,000, communicate with undersigned counsel, who will negotiate strictly confidential preliminaries for such positions. Not an employment agency; undersigned acts in direct confidential capacity. Send name and address only for preliminary details. R. W. Bixby, E. 1 Niagara Square, Buffalo, N. Y.

SALES AGENTS WANTED.—Large manufacturer of converters for moving-picture machines wants additional sales agents throughout the United States and Canada. Has one of the best propositions on the market. Machines produce true direct current for use in the arc and offer advantages over other machines. Liberal commissions. Address No. 3032, care Manufacturers Record.

SALESMAN to handle important leather belting account in the Southwestern States; good offer for live wire; experience preferable but not absolutely necessary. Write, giving full particulars so that interview can be granted. Address No. 3023, care Manufacturers Record, Balto., Md.

WANTED—First-class draughtsman; interior and exterior marble. Apply, stating age, experience, references and salary expected, to the Kennesaw Marble Co., Marietta, Ga.

WANTED—A first-class elevator salesman. Give full particulars in first letter. Moffatt Machinery Mfg. Co., Charlotte, N. C.

WANTED—Double-entry bookkeeper, competent to act as secretary and treasurer of town 7000. Address E. C. Bivins, Mt. Airy, N. C.

SITUATIONS WANTED

OPEN FOR ENGAGEMENT.—American. Long experience in responsible engineering, administrative and executive charge; important railroad and other works. Efficient organizer, securing results. Accustomed to handling delicate and confidential negotiations; private, financial investigations and reports. Clean record, reliable, dependable, temperate. Meet principals by appointment. Address No. 3030, care Manufacturers Record.

WANTED POSITION by man 33 years of age as bookkeeper or general office man; capable of taking full charge of office. Prefer position with coal company; however, this is not material. Can furnish first-class references. Would expect salary of \$125 per month at least to start with. Will gladly furnish all information concerning myself asked for. P. O. Box 563, Huntington, W. Va.

EXECUTIVE position with contractor or manufacturer; 12 years' experience general contracting, "deep foundations, good roads, designing and building sewers." One year in large machine shop, where now employed; shop about to close. Thorough education in business and the handling of large number of men successfully. Address No. 3029, care Manufacturers Record, Balto., Md.

BUILDING SUPPLY man, conversant on unit forms, with 15 years' practical experience in South, and known personally among leading architects, contractors and dealers, wants position as district manager or salesman with reliable manufacturer. Can furnish high-class references regarding sales, promoting ability and character. Address No. 3031, care Manufacturers Record.

FACTORY MANAGER or Superintendent in South. Increase your production and cut labor costs. Want big job. Address No. 3010, care Manufacturers Record, Balto., Md.

MACHINERY AND SUPPLIES

PUMPING PLANT

FOR SALE—SECOND-HAND PUMPING PLANT.—24" Worthington single-section centrifugal pump, 155 H. P. Babcock & Wilcox water-tube boiler, 240 H. P. Buckeye engine, vertical, cross-compound. Pumping capacity, 15,000 gal. per min. 36-ft. lift. Condenser, water heater, boiler feed pump and other attachments, complete. In perfect shape, ready to run. For particulars address P. O. Box No. 1, Pierce, Texas.

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

Bids close February 19, 1917.

PROPOSALS FOR STEEL, CHAIN, PIPE. Pipe Fittings, Nuts, Washers, Valves, Cocks, Chain Blocks, Tackle Blocks, Door Bolts, Furniture Casters, Door Catches, Scrub Brushes, Corn Brooms, Electric Cable and Wire, Electrical Attachments and Fittings, Transformers, Pencils, Floor Wax, Glue, Graphite, Putty, Muriatic Acid, Alcohol, Carbon Bisulphide, Turpentine Substitute, Paint Drier, Castor Oil, Lard Oil, Linseed Oil, Varnish, Paints, Litharge, White Zinc, Millwork and Lumber. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 A. M. February 19, 1917, at which time they will be opened in public for furnishing the above-mentioned articles. Blanks and information relating to this Circular (No. 1119) may be obtained from this office or the offices of the Assistant Purchasing Agents, 21 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the U. S. Engineer Offices in the principal cities throughout the United States. **EARL I. BROWN**, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Bids close February 15, 1917.

PROPOSALS FOR GASOLINE.—Annual estimate for the period ending March 31, 1918. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 A. M. February 15, 1917, at which time they will be opened in public for furnishing the above-mentioned articles. Blanks and information relating to this Circular (No. 1118) may be obtained from this office or the offices of the Assistant Purchasing Agents, 21 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the U. S. Engineer Offices in the principal cities throughout the United States. **EARL I. BROWN**, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

OFFICE OF SUPERINTENDENT U. S. CAPITOL BUILDING AND GROUNDS, WASHINGTON, D. C., January 24, 1917. Proposals, in duplicate, will be received at this office for various items in connection with the reconstruction of the courthouse, Washington, D. C., the most important of which will be the resurfacing of the building in limestone, including a granite base course and the reconstruction of the roof. Other items will follow. In each case notices will be issued naming the date and hour for the receipt of bids, or the amount of any deposit check for plans and specifications which may be required. Intending bidders are requested to file application for plans and specifications for the items in which they are interested. Such applications will be filed and issue made in accordance with the progress of the work. Plans and specifications for the stone work are now ready for issue. The right is reserved to reject any or all bids and to waive any technicality in any bid. **ELLIOTT WOODS**, Superintendent U. S. Capitol Building and Grounds.

Bids close March 8, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., January 25, 1917. Sealed proposals will be opened in this office at 3 P. M. March 8, 1917, for the construction of the United States postoffice at Pulaski, Va. Drawings and specifications may be obtained from the custodian of the site at Pulaski, Va., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close March 12, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., January 25, 1917. Sealed proposals will be opened in this office at 3 P. M. March 12, 1917, for the construction of the United States postoffice at Martin, Tenn. Drawings and specifications may be obtained from the custodian of the site at Martin, Tenn., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close March 7, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., January 27, 1917. Sealed proposals will be opened in this office at 3 P. M. March 7, 1917, for the construction of the United States postoffice at Bay City, Tex. Drawings and specifications may be obtained from the custodian of the site at Bay City, Tex., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close March 9, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., January 24, 1917. Sealed proposals will be opened in this office at 3 P. M. March 9, 1917, for the construction of the United States postoffice at Hammond, La. Drawings and specifications may be obtained from the custodian of the site at Hammond, La., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

PROPOSAL ADVERTISING INFORMATION

RATE: 25 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 9 A. M. Wednesday. Copy received later cannot be published until issue of following week.

NIGHT LETTER: When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—25 cents per line per insertion.

Bids close February 16, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., January 25, 1917. Sealed proposals will be opened in this office at 3 P. M. February 16, 1917, for furnishing and installing lighting fixtures in the United States postoffice at Aurora, Nebr.; the United States postoffice at Charles City, Iowa; the United States postoffice and courthouse at Charlotte, N. C.; the United States postoffice at Falls City, Neb.; the United States postoffice at Hackensack, N. J.; the United States postoffice at Hornell, N. Y.; the United States postoffice and courthouse at Opelika, Ala.; the United States postoffice at Seymour, Conn.; the United States postoffice at Shelby, N. C.; the United States postoffice at Taylorville, Ill.; the United States postoffice at Titusville, Pa.; and the United States postoffice at Waynesville, N. C., in accordance with drawings and specifications, copies of which may be had at this office. Proposals are desired only from those qualified to produce work of the highest grade both artistically and mechanically, and the right is reserved to refuse to send the drawings and specifications to or to receive proposals from anyone who, in the opinion of the Supervising Architect, is not so qualified. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close March 1, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., January 20, 1917. Sealed proposals will be opened in this office at 3 P. M. March 1, 1917, for the construction of the United States postoffice at Beeville, Tex. Drawings and specifications may be obtained from the custodian of the site at Beeville, Tex., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close February 6, 1917.

\$250,000 4½% Bonds
Petersburg, Va.
Sealed proposals will be received by the Finance Committee of the Council of the City of Petersburg, Va., February 6, 1917, at 4 o'clock P. M. for the purchase of the whole or any part of the following described bonds of the City of Petersburg: \$250,000 "Municipal Improvement 4½ Per Cent. Gold Bonds," dated January 1, 1917, and running 40 years straight, bearing interest at the rate of 4½ per cent. per annum, payable semi-annually on the first day of January and the first day of July at the office of the City Treasurer. Each proposal must be for the bonds and accrued interest from January 1, 1917, to date of delivery, and accompanied by a certified check on some responsible banking institution, payable to the Treasurer of the City of Petersburg, for 2 per cent. of the par value of the bonds bid for, and should be addressed to G. B. Gill, City Auditor of Petersburg, and marked "Proposals for 4½ Per Cent. Bonds."

N. T. PATTERSON, Chairman,
Finance Committee.

Bids close February 13, 1917.

\$16,000 5% Bonds

St. Joseph, La., Jan. 11, 1917.
The undersigned Committee of the Police Jury of Tensas Parish, Louisiana, will receive sealed proposals at the Courthouse at St. Joseph, Louisiana, at the hour of 12 o'clock noon on Tuesday, February 13, 1917, for the purchase of \$16,000 refunding bonds of said parish, bearing 5 per cent. interest per annum, payable semi-annually, of the denomination of \$100 each, five payable annually for 29 years and 15 payable the 30th year; same to sell for not less than par. Bids will be received for any portion of the above issue, or the whole thereof. Said bids to be accompanied with certified check for 10 per cent. of the amount bid for.

The committee reserves the right to reject all bids.

F. H. CURRY,
E. D. COLEMAN,
E. F. NEWELL,
Committee.

Bids close February 16, 1917.

\$150,000 Street Improvement Bonds

Pursuant to an Act of the General Assembly of North Carolina, enacted at its present session, the Board of Aldermen of the City of Gastonia will receive sealed bids Friday at 8 o'clock P. M. February 16, 1917, for an issue of one hundred and fifty thousand (\$150,000) dollars street-improvement bonds. Such issue is to bear not more than 5 per cent. interest and to be sold for not less than their face value. Certified check for not less than two thousand dollars (\$2000) must accompany all bids. The Board of Aldermen reserve the right to reject any and all bids.

For information as to financial condition of the city or other information apply to the undersigned.

T. A. RATCHFORD,
Clerk to the Board of Aldermen,
Gastonia, N. C., January 25, 1917.

Bids close February 16, 1917.

\$100,000 Bridge Bonds

Pursuant to an act of the General Assembly of North Carolina, enacted at its present session, the Board of County Commissioners of Gaston County will receive sealed bids Friday, February 16, 1917, at 12 o'clock noon, for an issue of one hundred thousand (\$100,000) dollars coupon bonds. The issue to be serial bonds, and to bear not more than five (5) per cent. interest. The first installment to be four thousand (\$4000) dollars, payable at the fifth year, and annually thereafter the payment of four thousand thousand (\$4000) dollars, until the issue be liquidated. The interest to be paid semi-annually.

The issue is for the purpose of bridge building.

Certified check for not less than 2 per cent. of the amount of the bid must accompany all bids. The right to accept or reject any or all bids is reserved by the Board. No bids will be considered for less than par.

Any desired information regarding this issue will be furnished by the Clerk.

O. B. CARPENTER,
Clerk to Board,
Gastonia, N. C., January 13, 1917.

Bids close February 23, 1917.

\$200,000 5½% Bonds

West Palm Beach, Fla.
Sealed bids will be received by the Board of Commissioners of the Lake Worth Inlet District at Room No. 11 Postoffice Building, West Palm Beach, Florida, until 12 o'clock noon February 23, 1917, for \$200,000 5½ per cent. bonds of the Lake Worth Inlet District. Certified check 10 per cent. Full information upon application.

H. C. HOOD,
Chairman.

Bids close March 5, 1917.

\$10,000 4½% Bonds

Sealed bids will be received until noon March 5, 1917, by A. T. Shields, County Clerk, Lexington, Va., for \$10,000 4½ per cent. Rockbridge County Bonds, dated April 2, 1917. For detailed information send stamped envelope to the undersigned.

J. J. L. KINNEAR,
Lexington, Va., R. F. D. No. 6;
J. P. WELSH,
Lexington, Va.,
Supervisors,
Committee on Bonds.

Bids close February 15, 1917.

\$8000 Road Bonds

Sealed bids will be received until 10 o'clock A. M. February 15, 1917, for \$8000 Jackson Township Road Bonds. For information address

G. A. MOORE,
Secretary Board of Road Commissioners,
Jackson, N. C.

Bids close February 21, 1917.

Water and Light Improvement Bonds

Sealed bids will be received at Lumberton, N. C., until 12 o'clock noon Wednesday, February 21, 1917, for the purchase of \$51,000 Town of Lumberton 20-year serial bonds; to be in denominations to suit the purchaser. Bids desired on 5 per cent. and 6½ per cent. bonds separately, interest to be agreed upon at sale and payable semi-annually. Place of payment optional with purchaser. All bids must be accompanied with \$500 certified check, payable to the undersigned. The Board of Commissioners reserve the right to reject any and all bids.

IRA B. TOWNSEND,
Clerk and Treasurer.

Bids close February 13, 1917.

\$20,000 5% Bonds

Murray, Ky., January 24, 1917.

Sealed proposals will be received by C. M. Smoot, City Clerk of the City of Murray, Ky., until noon on February 12, 1917, for the purchase of bonds to the amount of \$20,000, in denominations of \$500 each, bearing interest at the rate of 5 per cent. per annum. Interest payable semi-annually on the 1st days of April and October. Said bonds to be issued by the City of Murray, Ky., for the purpose of constructing a municipal electric-light and power system and improving the municipal water-works system. Said bonds to be dated April 1, 1917, and due in twenty years from date, with the option on the part of the said City of Murray to pay any or all of said bonds at any time after five years from date of said bonds. Each bid for said bonds shall be accompanied by a certified check on some solvent bank for \$500 as evidence of good faith of the bidder. The City Council hereby reserves the right to reject any or all bids for said bonds.

C. M. SMOOT,
City Clerk.

Bids close February 9, 1917.

Road Construction

The Fiscal Court of Clinton County will receive sealed bids February 9, 1917, for the construction of the following roads:

From Albany to the Wayne county line, 11.23 miles; water-bound macadam surface.
From Albany to Snow, 4.13 miles, 2 miles water-bound macadam surface.
From Albany to Tennessee line, 6.64 miles, grading only.

Approximate quantities:
Earth excavation, 80,000 cu. yds.
Rock excavation, 10,000 cu. yds.
Concrete, 700 cu. yds.
Macadam, 17,000 cu. yds.

Bids will be received separately on concrete.

Plans and specifications on file with Commissioner of Public Roads, Frankfort, Ky., and County Clerk, Albany, Ky.

J. G. SLOAN,
Clerk Clinton County Court.

Bids close February 13, 1917.

Highway and Bridges

STATE OF MARYLAND.
STATE ROADS COMMISSION.
NOTICE TO CONTRACTORS.

Sealed proposals for the following:

Contract No. 048—CECIL COUNTY: One section of road leading from Porter's Bridge to Rising Sun, about 3.40 miles in length. (Concrete or oil-bound macadam construction.)

Contract F-25—FREDERICK COUNTY: One section of road leading from Emmitsburg to Bridgeport, about 5.00 miles in length. (Concrete or oil-bound macadam construction.)

Bascule Spans.

Two duplicate Bascule Spans—40 feet clear. Contract W-12, Section 2, WORCESTER COUNTY: One over Sinepuxent Bay at Ocean City, Maryland.

Contract 0266, Section 2, BETWEEN KENT AND CECIL COUNTIES: One over Sassafras River at Georgetown, Maryland.

Will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Maryland, until 12 M. on the 13th day of February, 1917, at which time and place they will be publicly opened and read.

Bids must be made upon the blank form contained in the book of specifications. Specifications and plans will be furnished by the Commission upon application and cash payment of \$1, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of five hundred (\$500) dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 26th day of January, 1917.

FRANK H. ZOUCK,
Chairman.
CLYDE H. WILSON,
Secretary.

PROPOSALS

SEWERS WATER WORKS ELECTRIC LIGHT PLANTS BRIDGES

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

Bids close Feb. 6, 1917.

Highway Construction

Sealed proposals, on blank forms attached to specifications, will be received by the Board of County Commissioners of Taylor County, Florida, at the office of the Clerk of the County, Perry, Florida, for the construction of improved highways in Taylor County, Florida.

Said proposals will be received until ten o'clock A. M. February sixth (6), 1917, at which time they will be opened and read publicly. Contract will be awarded as soon as practicable thereafter.

Bids will be asked for as follows:

Approximately—458,537 lin. ft. roadway, 34 miles.

Approximately—101,545 cu. yds. excavation.

Approximately—606,406 cu. yds. embankment.

Approximately—443,693 sq. yds. pavement, surface treated macadam.

Approximately—917,074 lin. ft. wooden curb (sunken).

Approximately—1425 lin. ft. drain pipe, 15" to 30".

Approximately—1640 lin. ft. pile to be driven.

Approximately—\$7.3 M. ft. lumber for bridge construction.

Approximately—362.3 cu. yds. concrete, class "A."

Each bid must be accompanied by a certified check on a State or a national bank, or any other approved bank, for five (5) per cent. of the amount bid, except if such should exceed ten thousand (\$10,000) dollars, then said check may be drawn for said ten thousand (\$10,000) dollars, drawn to the order of the Clerk of Court, John C. Calhoun.

Plans and specifications may be seen at the office of Clerk of Court, Perry, Florida, and at the office of Engineer W. A. Sanders, Perry, Florida. Copies of the specifications may be obtained from either above stated offices upon application for same. Copies of plans may be obtained from engineer's office, Perry, Florida, upon receipt of ten (\$10) dollars.

The right is reserved by the Board of County Commissioners to reject any or all, or any portion of bids, or accept any bid that may be to the best interest of Taylor County.

BOARD OF COUNTY COMMISSIONERS,
Taylor County, Florida.
J. N. DEAL, Chairman.
JOHN C. CALHOUN, Clerk.
W. A. SANDERS, Engr., Perry, Fla.

Bids close February 14, 1917.

Street Paving

OFFICE OF THE PAVING COMMISSION, Baltimore, Md.

Separate sealed proposals, executed in duplicate, addressed to the Board of Awards, care of the City Register, will be received by him in his office in the City Hall until 11 A. M. Wednesday, February 14, to grade, curb and pave with Sheet Asphalt, Vitrified Block, Wood Block, Granite Block and Granite Block Redressed, all on concrete base, the following contracts:

CONTRACT No. 142.
Sheet Asphalt..... 55,800 sq. yds.
Vitrified Block..... 7,285 "
Wood Block..... 1,429 "
Granite Block..... 1,290 "
Certified Check..... \$5,800.00

CONTRACT No. 143.
Sheet Asphalt..... 58,000 sq. yds.
Vitrified Block..... 5,300 "
Wood Block..... 150 "
Granite Block Redressed..... 375 "
Certified Check..... \$3,500.00

CONTRACT No. 144.
Sheet Asphalt..... 78,900 sq. yds.
Vitrified Block..... 6,000 "
Wood Block..... 760 "
Granite Block Redressed..... 2,000 "
Certified Check..... \$5,100.00

CONTRACT No. 145.
Sheet Asphalt..... 41,860 sq. yds.
Vitrified Block..... 3,200 "
Granite Block..... 1,080 "
Granite Block Redressed..... 5,390 "
Certified Check..... \$3,100.00

CONTRACT No. 146.
Granite Block Redressed..... 7,550 sq. yds.
Certified Check..... \$700.00

The figures above represent the approximate quantities of the principal items appearing in the contracts.

Specifications and proposal sheets and all other information can be obtained at the office of the Paving Commission, No. 214 E. Lexington Street. A deposit of \$5 will be required for a specification covering each contract. This will not be refunded unless a bid is filed.

The Board of Awards reserves the right to reject any and all bids. A certified check of the bidder on a clearing-house bank, drawn to the order of the Mayor and City Council of Baltimore to the amount as recited above, must accompany each bid.

The successful bidder will be required to furnish bond and to comply with the City Charter respecting contracts.

By order of the Paving Commission.
(Signed) LEONIDAS G. TURNER,
Chairman Pro. Tem.

Bids close February 19, 1917.

County Road Work

FAYETTEVILLE DISTRICT,
FAYETTE COUNTY, WEST VIRGINIA.
Fayetteville, W. Va., January 3, 1917.

Sealed proposals will be received at the office of the Clerk of the County Court, Fayetteville, West Virginia, until 2 P. M. February 19, 1917, for the construction of ten sections of county highway, aggregating 45.8 miles.

Bids will be received for bituminous macadam (penetration), Portland cement concrete, vitrified brick, asphaltic concrete, and other improved types of paving. Bids must be made on the blank form contained in the book of specifications. Specifications and other information can be obtained upon application to J. K. McGrath, Fayetteville District Road Engineer, Mount Hope, West Virginia. Specifications and plans are also on file in the office of the Clerk of the County Court, Fayetteville, W. Va., but not available for distribution.

A cash deposit of \$5 will be required for each set of specifications covering a section, the same to be refunded if bid is filed.

All work will be paid for in cash. A certified check for five per cent. (5%) of the proposal, made payable to the order of the Sheriff of Fayette County, shall be filed with each bid. The court reserves the right to reject any and all bids.

J. K. McGRATH,
Road Engineer.

By order of the County Court of Fayette County, West Virginia.

PHILIP KONRAD, President.
R. J. STEGALL, Clerk.

Bids close February 6, 1917.

Timber Draw Bridge

Sealed bids will be received by the Board of County Commissioners of Palm Beach County, Florida, at the Clerk's office, at West Palm Beach, Florida, up to 12 o'clock noon Tuesday, February 6, 1917, for furnishing all material and labor and the construction of a Timber Draw Bridge over the Florida Coast Line Canal, known also as Jupiter River, at Jupiter, Florida, according to plans and specifications for same on file in the Clerk's office. Copies of the plans and specifications may be obtained from the Clerk on deposit of \$7.50, which amount will be refunded upon return of the plans and specifications in good order on or before the day for opening bids.

A certified check or bid bond in a sum equal to two per cent. of the bid will be required to accompany each bid, and shall run to the order of the Board of County Commissioners, as a guaranty of good faith, and will be forfeited if the bidder fails to enter into contract and furnish satisfactory bond within the time specified, if the contract be awarded him by the Board.

A form of bidding blank is attached to the specifications.

The Board reserves the right to reject any irregular bid or bids not complying with the specifications.

By order of the Board of County Commissioners.

TREVETTE A. LOCKWOOD, Chairman.
GEO. O. BUTLER, Clerk.
(Seal County Comm.)

Bids close February 20, 1917.

Courthouse

Georgia, Lee County.

Bids will be received by T. S. Burton, Chairman of the Building Committee of Lee County, Ga., in the office of the County Clerk in Leesburg, Ga., until February 20, 1917, at 10 o'clock A. M., for the erection of a courthouse for the said county. To be two stories; to contain offices for all necessary county officials, courthouse and jury rooms, etc.; to be built of brick, hollow tile and concrete frame with limestone trimmings; slate roof and copper tower. Building will be heated by one pipe, low-pressure steam system, and is to cost not exceeding \$40,000. The construction of said building to begin within fifteen days after awarding the contract and to be completed within eight months from this date.

Payments for work and material to be made from time to time on estimates furnished from the contractor and approved by the architect, averaging 85 per cent. of the work done and material on the ground. Balance of 15 per cent. to be paid when the building is fully completed and accepted by the architect and building committee.

Each bidder to deposit with his bid a certified check for \$1000, payable to T. S. Burton, Chairman of the Building Committee, or his successor, as a guarantee that he will enter into a contract with the county upon the terms of his bid within fifteen days after its acceptance, and give bond with security in the sum of 200 per cent. and that upon his failure to enter such a contract and give bond said check to be retained by the Secretary, or his successor, as liquidated damages.

Plans and specifications may be procured by contractors wishing to make a bid on same on a deposit of \$25 with T. S. Burton, Chairman of the Building Committee, or with the Architect, J. J. Baldwin, Anderson, S. C. Plans will also be on file in the office

of the Chairman and in the office of the Architect.

The Building Committee reserves the right to reject any and all bids.

This 12th day of December, 1916.

T. S. BURTON,
Chairman for Building Committee.
J. J. BALDWIN,
Architect.
Anderson, S. C.

Bids close Feb. 26, 1917.

Miami, Florida Y. M. C. A.

The directors of the Miami Y. M. C. A. at a meeting January 2, 1917, moved and carried that Architect H. Hastings Mundy be instructed by this board to ask for bids on the plans submitted by him, and also for bids on an additional story which would give 84 sleeping rooms. Said bids to be alternate bids on a three-story and a four-story building with basement.

Working plans are now being prepared by the architect and are to be ready for distribution on January 26, 1917. On or after January 26, 1917, plans and specifications will be on file at the office of the general secretary of the Miami Y. M. C. A., Burdine Building. Full sets of plans and specifications, together with proposal forms, may be had on or after the above date from H. Hastings Mundy, architect, 236 12th street, upon payment of a deposit of fifty (\$50) dollars. To depositors returning sets of plans and specifications in good condition, thirty-five (\$35) dollars will be refunded. The Board of Directors will receive bids

upon the proposed building until 7.30 P. M. February 26, 1917. A bid bond in a sum equal to 25% of the amount of the contractor's highest bid in the list of alternates will be required to accompany the contractor's bids, to stand as a guarantee that the contractor, if successful, will enter into a contract in accordance with the proposal forms furnished with the specifications. Said bond is to be from a well-known surety company, authorized by law to transact business of this character in the State of Florida. January 5, 1917.

Bids close February 15, 1917.

Packing Plant and Equipment

Sealed proposals will be received by the Orangeburg Packing Company at its office in the City of Orangeburg, South Carolina, at 12 o'clock noon on Thursday, February 15, 1917.

1st. On a reinforced concrete and brick packing-house.

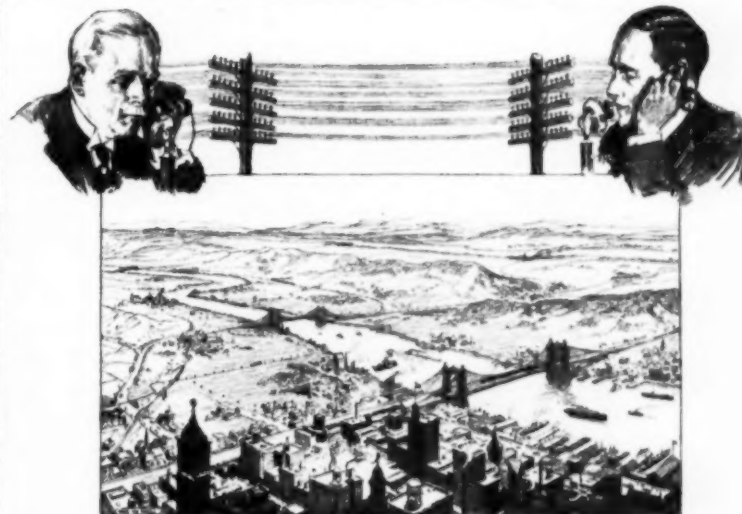
2d. On the complete equipment of a packing plant.

Plans and specifications may be had on application to Wilson & Sompayrac, Architects, Palmetto Building, Columbia, S. C., or to the Packers' Architectural & Engineering Company, Manhattan Building, Chicago, Ill.

A deposit of \$25 will be required as an evidence of good faith and guarantee that all documents will be returned promptly.

The right is reserved to reject any or all bids.

ORANGEBURG PACKING COMPANY.



A Bee-Line to Everyone

Straight as the bee flies and quick as though caught by lightning the voice in the telephone carries near and far over this Nation.

This marvelous instrument is the pre-eminent vehicle of speed and speech. Railroads cover the country, but your traveler often must alight with bag and baggage and change trains to get to a given point. Railroads reach cities, towns and villages. The telephone reaches the individual.

The telephone offers continuous passage for the voice and unbroken connections to the uttermost places because it is a united System co-ordinated to the single idea of

serving the entire people of this country.

It has been a powerful factor, along with the transportation systems, in the magnificent achievements of the United States—helping to prepare the way where latent possibilities of mines, forests and farms were to be developed.

The continued growth of our national prosperity depends in a great measure upon the maintenance and continued growth of the utilities which furnish the means of intercourse and interchange. They are the indispensable servants of the individual, the community and the entire nation.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy

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Special Advertisements of General Interest.

FOR SALE Clarksburg Northern Railroad Co.

On February 10, 1917, at the Courthouse in New Martinsville, Wetzel County, West Virginia, between the hours of 9 o'clock A. M. and 5 o'clock P. M., the railroad, including rolling stock, machinery, tools, rights of way, buildings, rails, bridges, trestles, and all other property belonging thereto, owned by the Clarksburg Northern Railroad Company, a corporation, will be sold by order of Court. The road extends from New Martinsville, West Virginia, to Middlebourne, West Virginia, consists of rights of way 60 feet wide and 13.40 miles long; 13.40 miles of main track, standard gauge, rolling stock, bridges, trestles, tools and other personal property. The Special Commissioners in making the sale will offer and sell that part of the property mentioned and described in the Court's decree as the Westchester Extension separate; and the residue of said property will be (1) offered in bulk, and (2) separate, to wit: Rolling stock, rails, ties, rights of way, bridges, trestles, machinery, tools, etc. If said property shall bring more by selling in bulk, the same shall be so sold; and if it should bring more by selling separate, the same shall be so sold.

E. H. YOST,
MORRIS DAUGHERTY,
O. J. HILL,
LLOYD MORRIS,

Special Commissioners.

P. S.—For further information inquire of E. H. Yost, New Martinsville, W. Va.

To Shipbuilders, Repairers, Dry Dock Companies, Etc.

We have FOR SALE four hundred sticks ALABAMA HEWN OAK TIMBER of excellent specification.

Ten by eleven to twenty-eight inches square.

Seventeen to fifty-four feet long, average lineal thirty-three feet.

Average per stick, seven hundred and fifty superficial feet.

THE S. K. TAYLOR LUMBER COMPANY
Mobile, Alabama

TIMBER SALE

AT AUCTION, FEBRUARY 8th, 1917

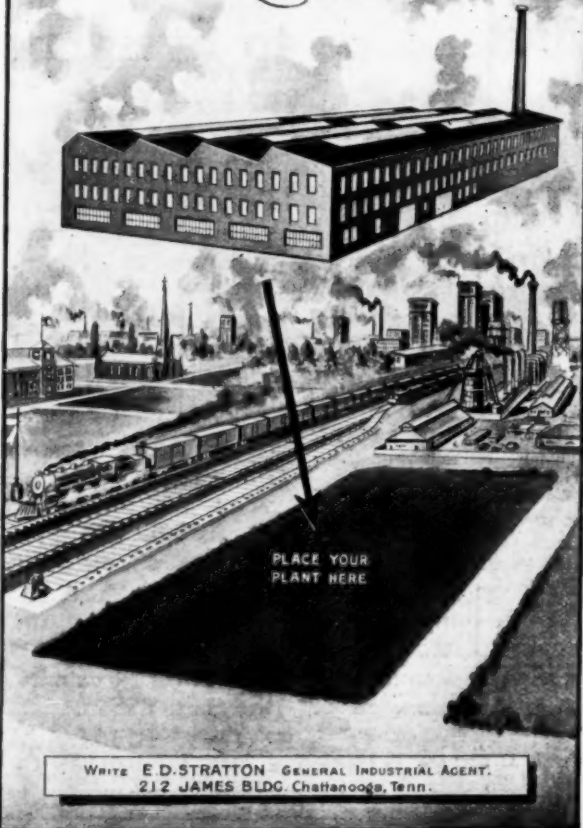
At Raleigh, N. C., of about 8,000,000 feet of short straw pine and about 400,000 feet of oak, hickory and poplar, on W. R. Poole Estate, land near Raleigh, N. C. Much of said timber is only a short distance from the tracks of the Norfolk-Southern Railroad and of the Southern Railway.

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ERNEST HAYWOOD, Trustee

RALEIGH, N. C.

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Read page advertisement in this issue describing resources of Northwest Georgia and write us for further information.

Lumpkin Realty Company of Georgia
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We also solicit correspondence and interviews with high-grade Southern concerns regarding a direct Chicago banking connection.

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CHICAGO

Capital and Surplus, \$3,000,000.00
Deposits, \$33,000,000.00

Established 1869

FOR SALE

Complete equipment of Sand Lime Brick Plant, consisting of engines, boilers, drying cylinders, brick presses, cars, crushers, tube mills, sand dryers, elevators and conveyors.

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1420 Chestnut St. PHILADELPHIA, PA.

Metal Roofing and Shingle Factory
FOR SALE

With patent rights for greatest shingle ever used. Can be bought very cheap.

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Watchman's App'd
Office and Factory.

DIALS, SUPPLIES and REPAIRS
for Any Time Recording Device.

L. E. KAISER Baltimore & Liberty St.
BALTIMORE, MD.

312-Kva Alternator For Sale

312 K. V. A., 225 R. P. M., 2400-volt, 3-phase, 60-cycle Electric Machinery Company Alternator; complete with field rheostat; mounted on two bearings and soleplates; can be coupled to prime mover or belted, or used as engine type by removing bearings and shaft. Will refinish and deliver in first-class condition.

ELECTRIC MACHINERY CO.

14th Ave. N. E. and Tyler St. Minneapolis, Minn.

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- | | |
|---|---|
| 1 150 H. P. Horizontal Tubular Boiler with fixtures complete. | 1 30 H. P. Double-Drum Hoisting Engine for use with Derrick. |
| 1 125 H. P. Engine, Houston, Stanwood & Gamble make. | 1 22 H. P. "American" Hoisting or Slew-ing Engine for handling above Derrick. |
| 1 Pittsburgh Feed-Water Heater for 150 H. P. boiler. | 1 No. 5 Austin Crusher. |
| 1 Steel Derrick, 10-ton capacity; 115' mast, 112' boom, bull wheel. | 40 tons 45-lb. Steel Rails. |
| | F. o. b. cars Winchester, Ky. |

South Side Foundry & Machine Works
Charleston, W. Va.

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